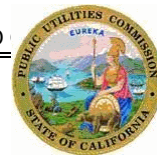


## PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE

SAN FRANCISCO, CA 94102-3298

**FILED**

2-05-14

Agenda ID #12748 12:12 PM

Ratesetting

February 5, 2014

## TO PARTIES OF RECORD IN RULEMAKING 11-09-011:

This is the proposed decision of Administrative Law Judge Regina DeAngelis. Until and unless the Commission hears the item and votes to approve it, the proposed decision has no legal effect. This item may be heard, at the earliest, at the Commission's March 13, 2014 Business Meeting. To confirm when the item will be heard, please see the Business Meeting agenda, which is posted on the Commission's website 10 days before each Business Meeting.

Parties of record may file comments on the proposed decision as provided in Rule 14.3 of the Commission's Rules of Practice and Procedure.

/s/ MARYAM EBKE for  
Karen V. Clopton, Chief  
Administrative Law Judge

KVC:sbf

Attachment

Decision **PROPOSED DECISION OF ALJ DEANGELIS** (Mailed 2/5/14)

**BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking on the Commission's Own Motion to improve distribution level interconnection rules and regulations for certain classes of electric generators and electric storage resources.

Rulemaking 11-09-011  
(Filed September 22, 2011)

**DECISION ADOPTING REVISIONS TO ELECTRIC TARIFF RULE 21 TO  
INCLUDE A DISTRIBUTION GROUP STUDY PROCESS AND ADDITIONAL  
TARIFF FORMS**

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**DECISION ADOPTING REVISIONS TO ELECTRIC TARIFF RULE 21 TO  
INCLUDE A DISTRIBUTION GROUP STUDY PROCESS AND ADDITIONAL  
TARIFF FORMS****1. Summary**

Today's decision directs Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E) to incorporate a Distribution Group Study Process into Electric Tariff - Rule 21, the interconnection tariff under this Commission's jurisdiction.

Rule 21 describes the interconnection requirements and cost allocation for generating facilities to be connected to the utilities' distribution system and transmission systems over which the Commission has jurisdiction. The Commission most recently revised Rule 21 in Decision 12-09-018. In adopting the additional revisions today, the Commission acknowledges the Legislative directive in Assembly Bill (AB) 327, effective January 1, 2014, directing the Commission to, among other things, identify barriers to the deployment of distributed generation under Rule 21.<sup>1</sup>

We further adopt several form agreements for use by the utilities under Rule 21, including a pre-application report request, an independent study process agreement, and an interconnection agreement for exporting generation.

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<sup>1</sup> AB 327 (Perea, Stats. 2013, ch. 611), to be effective January 1, 2014, adds § 769 to the Pub. Util. Code. Section 769(c) provides that "[T]he commission shall review each distribution resources plan proposal submitted by an electrical corporation and approve, or modify and approve, a distribution resources plan for the corporation. The commission may modify any plan as appropriate to minimize overall system costs and maximize ratepayer benefit from investments in distributed resources."

Finally, to incorporate these revisions into Rule 21, we direct PG&E, SCE, and SDG&E to file Tier 1 Advice Letters with these new forms and a Distribution Group Study Process.

This proceeding remains open.

## **2. Distribution Group Study Process**

This decision adopts a Distribution Group Study Process for requests for interconnection under Electric Tariff - Rule 21 (Rule 21). The Commission envisions the group study process adopted today as providing a more equitable approach to the current options for interconnection under Rule 21.

Under the existing terms of Rule 21, all projects seeking interconnection to the distribution system must be studied serially, in a first-come, first-served process. This process is referred to as the Independent Study Process.<sup>2</sup> The Independent Study Process can be time consuming and the costs are not evenly distributed among interdependent applicants.<sup>3</sup>

For example, under the existing Rule 21 and the Independent Study Process, an applicant that is electronically interdependent with an earlier queued distribution interconnection project is required to wait to proceed until the prior queued project completes its Independent Study Process or, if available, the applicant has the option of joining a Transmission Cluster Study Process under

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<sup>2</sup> See, e.g., Pacific Gas and Electric Company (PG&E) Tariff Rule 21 at sec. F.3.d.

<sup>3</sup> See, e.g., PG&E Electric Tariff Rule 21 at sec. E.4.e. Pursuant to Commission decisions, the terms and number of Rule 21 are identical for PG&E, Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E). References to Rule 21 will cite to PG&E's tariff but SCE's and SDG&E's tariff are equally applicable.

the utilities' federal wholesale tariffs.<sup>4</sup> However, the availability of the Transmission Cluster Study Process is limited because it only applies to projects that fall within federal jurisdiction. The Transmission Cluster Study Process can also be very lengthy, often lasting at least two years.<sup>5</sup>

In addition, under the existing Rule 21 and the Independent Study Process, cost allocation and upgrade costs, if any, are not evenly spread among interdependent applicants.<sup>6</sup> Distribution upgrade costs are carried by the first project that triggers the need for an upgrade.<sup>7</sup> Moreover, under the existing Rule 21 options, when a prior project fails to complete an upgrade or drops out of the queue, subsequent projects may require costly restudies or be allocated additional expenses for upgrade construction.

The Commission envisions the group study process adopted today and referred to as the Distribution Group Study Process as providing a more equitable, efficient, and timely approach to the current options for interconnection under Rule 21. This new process will, among other things, promote timeliness, the non-discriminatory processing of interconnection applications, improve cost-effectiveness, and increase transparency. As a result, the interconnection process for distributed generation will better accommodate increases in applications for interconnection by small distributed generation

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<sup>4</sup> See, e.g., PG&E Electric Tariff Rule 21 at sec. F.3.c. The Transmission Cluster Study Process is set forth in the utilities' wholesale distribution tariff under the jurisdiction of the Federal Regulatory Energy Commission (FERC).

<sup>5</sup> Interstate Renewable Energy Council (IREC) March 8, 2012 comments at 4.

<sup>6</sup> See, e.g., PG&E Electric Tariff Rule 21 at sec. E.4.c.

<sup>7</sup> See, e.g., PG&E Electric Tariff Rule 21 at sec. E.4.e.

under California's Renewable Portfolio Standard (RPS) Program (Pub. Util. Code § 399.11 through § 399.32).<sup>8</sup>

The specifics of the adopted group study process are discussed below.

## **2.1. Procedural Background**

In Decision (D.) 12-09-018,<sup>9</sup> the Commission adopted revisions to Rule 21 reflected in the March 2, 2012 Proposed Settlement submitted in Phase I of this proceeding. In advance of the Commission's issuance of D.12-09-018, Vote Solar Initiative filed a motion, also on March 2, 2012, requesting the Commission to initiate consideration of a group study process, the Distribution Group Study Process.<sup>10</sup>

Vote Solar Initiative's motion was granted by the April 20, 2012 *Administrative Law Judge's Ruling Granting the Motion of Vote Solar* (April 20, 2012 ALJ Ruling). The April 20, 2012 ALJ Ruling served to initiate the Commission's

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<sup>8</sup> The RPS Program was established by Senate Bill (SB) 1078, effective January 1, 2003 (Sher, Stats. 2002, ch. 516). This legislation established, among other things, that the amount of electricity procured per year from eligible renewable energy resources, as defined therein, would be an amount equal to at least 20% of the total electricity sold to retail customers in the state by December 31, 2017. The Legislature accelerated this goal to 20% by 2010 in SB 107 (Simitian, Stats. 2006, ch. 464). In 2011, SB 2 of the 2011-2012 First Extraordinary Session (Simitian, Stats. 2011, ch. 1) (SB 2 1X) extended the RPS goals from 20% of retail sales of utilities, electric service providers, and community choice aggregators by the end of 2010 to 33% of retail sales by 2020. Most recently, Assembly Bill 327 (Perea, Stats. 2013, ch. 611), establishes that the 33% requirement is a floor (not a ceiling) and was signed by the Governor on October 7, 2013.

<sup>9</sup> D.12-09-018, *Decision Adopting Settlement Agreement Revising Distribution Level Interconnection Rules and Regulations – Electric Tariff Rule 21 and Granting Motions to Adopt the Utilities' Rule 21 Transition Plans* (September 13, 2012).

<sup>10</sup> *Motion of Vote Solar Initiative to Adopt an Interim Procedure* (March 2, 2012) at 3.



consideration of the Distribution Group Study Process by setting a workshop on June 6, 2012 and establishing a schedule for comments on this process.

This workshop was held at the Commission on June 6, 2012, and, on July 10, 2012, PG&E and SCE filed separate outlines proposing a Distribution Group Study Process. SDG&E later indicated its support for and joined in PG&E's proposal.<sup>11</sup> Parties filed comments on the utilities' outlines for a Distribution Group Study Process on July 31, 2012.<sup>12</sup> Reply comments were filed on August 21, 2012.<sup>13</sup>

The September 26, 2012 Assigned Commissioner's Ruling initiated Phase II of this proceeding and identified for consideration in Phase II, among other things, the topic of a Distribution Group Study Process for distribution interconnection under Rule 21.<sup>14</sup>

On February 19, 2013, PG&E, SCE, and SDG&E filed proposed tariff language for revisions to Rule 21 that more fully developed their July 10, 2012 outlines for their Distribution Group Study Processes.<sup>15</sup> Parties filed comments

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<sup>11</sup> SDG&E expressed its support for and joined with PG&E's proposal in their *Joint Distribution Group Study Tariff Filing of PG&E and SDG&E* (February 19, 2013).

<sup>12</sup> Parties filing comments include: Solar Energy Industries Association (SEIA), Sustainable Conservation, the Sierra Club and Vote Solar Initiative, Clean Coalition, and SDG&E.

<sup>13</sup> Parties filing reply comments include: SCE, PG&E, SDG&E, Sustainable Conservation, and Clean Coalition.

<sup>14</sup> *Assigned Commissioner's Amended Scoping Memo and Ruling Requesting Comments* (September 26, 2012) at 3.

<sup>15</sup> On February 19, 2013, PG&E and SDG&E submitted a single filing, *Joint Distribution Group Study Tariff Filing of Pacific Gas and Electric Company and San Diego Gas & Electric Company*. In this filing, PG&E and SDG&E explain that the two utilities have

*Footnote continued on next page*

and reply comments on the proposed tariffs on March 8, 2013<sup>16</sup> and March 22, 2013.<sup>17</sup>

## **2.2. Goals**

This rulemaking seeks to “ensure that the interconnection process is timely, non-discriminatory, cost-effective, and transparent.”<sup>18</sup> The Commission’s goals in establishing a Distribution Group Study Process are consistent with the goals of this rulemaking. Any Distribution Group Study Process incorporated into Rule 21 should promote these goals.

## **2.3. Utilities’ Proposals**

### **2.3.1. PG&E**

PG&E suggests that a Distribution Group Study Process for electrically interdependent projects will create efficiencies, reduce disparities in results, increase transparency in the interconnection process, prevent previously queued projects from adversely impacting subsequent projects, and enable cost sharing of construction and upgrade costs. PG&E’s proposal for a Distribution Group Study Process includes the following main components:

Interconnection applications submitted under PG&E’s proposed Rule 21 for projects found to be electrically interdependent on the distribution system

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substantially the same tariffs for Electric Rule 21 and propose substantially the same revisions to incorporate a Distribution Group Study Process. SCE filed separately.

<sup>16</sup> Comments were filed by Clean Coalition, Office of Ratepayer Advocates (ORA), IREC, SCE, PG&E, and SDG&E.

<sup>17</sup> Reply comments were filed by PG&E, SCE, SDG&E and Clean Coalition.

<sup>18</sup> Rulemaking 11-09-011 at 2.

would be studied together and grouped into one of the two annual study groups convened per calendar year.<sup>19</sup>

Whether a project is electrically interdependent would be determined by PG&E.<sup>20</sup> PG&E would make this determination by evaluating each Interconnection Request for “known or reasonably anticipated relationships between the Interconnection Request and any earlier-queued interconnection requests in the Distribution Group Study Process, the Independent Study Process, or interconnection requests studied under predecessor interconnection procedures that have yet to complete their respective interconnection system impact study or Phase I interconnection study.”<sup>21</sup>

PG&E would form a study group when two or more generating projects seek interconnection in a similar electrical area or at the same point of interconnection as determined by PG&E’s engineering judgment.<sup>22</sup> The electrical area in which applicants seek to interconnect along a particular circuit would demarcate the area which would constitute the group.

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<sup>19</sup> PG&E July 10, 2012 proposed DGSP outline at slide 3.

<sup>20</sup> PG&E July 10, 2012 proposed DGSP outline at slide 10.

<sup>21</sup> PG&E July 10, 2012 proposed DGSP outline at slide 13; PG&E’s and SDG&E’s February 19, 2013 *Joint Distribution Tariff Filing* at proposed tariff at sec. G.3.b.

<sup>22</sup> On August 21, 2012, PG&E clarified its definition of “electrical independence” by citing to Rule 21, Screen R. Screen R enables the utility to conduct tests and reviews in order to determine whether a project is electrically independent of earlier-queued interconnection requests. The results of these tests inform a utility’s “engineering judgment” to determine whether a distribution group study is needed and feasible. PG&E August 21, 2012 reply comments.

PG&E would form two study groups annually, spaced six months apart, with 30-day application windows.<sup>23</sup> The study group timelines would be consistent with the timeline under Rule 21 for the Independent Study Process.<sup>24</sup>

The Independent Study Process, set forth in Rule 21, seems to be available as an alternative option if the project qualifies, except during the application window periods when study groups will be formed for the Distribution Group Study Process.<sup>25</sup>

PG&E's proposal includes lengthening the group study timeline if the volume of distribution group study applicants is unexpectedly high.<sup>26</sup>

Network and distribution upgrade costs would be allocated among the group study participants, similar to the Transmission Cluster Study Process under federal wholesale tariffs.<sup>27</sup> In the case of an applicant dropping out from a study group, costs would be reallocated to the remaining generator participants and any restudy costs would be conducted at the group's expense.<sup>28</sup>

PG&E proposes to seek approval from FERC to harmonize its federal wholesale tariff process with any Rule 21 Distribution Group Study Process so

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<sup>23</sup> PG&E July 10, 2012 proposed DGSP outline at slide 3.

<sup>24</sup> See, e.g., PG&E Electric Tariff Rule 21 at sec. G.3.c.

<sup>25</sup> PG&E July 10, 2012 proposed DGSP outline at slide 6.

<sup>26</sup> PG&E August 21, 2012 comments at 6; PG&E's and SDG&E's February 19, 2013 *Joint Distribution Tariff Filing* at proposed tariff at sec F.3.b.xiii (automatic timing extensions).

<sup>27</sup> PG&E proposal DGSP outline at slide 17; PG&E's and SDG&E's February 19, 2013 *Joint Distribution Tariff Filing* at proposed tariff at sec. G.3.c.

<sup>28</sup> PG&E proposal DGSP outline at slide 17; PG&E's and SDG&E's February 19, 2013 *Joint Distribution Tariff Filing* at proposed tariff at sec. F.3.B.xii.

that electrically dependent applicants under both Rule 21 and the federal wholesale tariffs may be studied together.<sup>29</sup>

PG&E also proposes a transition plan under which it would group pending applicants now being processed under the Independent Study Process into any applicable study groups.<sup>30</sup>

All costs would be allocated among the projects in the study group on a per megawatt (MW) basis.<sup>31</sup>

More details regarding PG&E's proposal are found at Attachment A, the February 19, 2013, *Joint Distribution Group Study Tariff Filing of Pacific Gas and Electric Company and San Diego Gas & Electric Company*.

### **2.3.2. SDG&E**

SDG&E also proposes to implement a Distribution Group Study Process. SDG&E joins PG&E's proposal as described above.<sup>32</sup> On February 19, 2013, PG&E and SDG&E submitted a single filing, *Joint Distribution Group Study Tariff*

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<sup>29</sup> PG&E July 10, 2012 proposed DGSP outline at slide 18; PG&E August 21, 2012 comments at 7.

<sup>30</sup> PG&E July 10, 2012 proposed DGSP outline at slide 18; PG&E August 21, 2012 comments at 7.

<sup>31</sup> This cost allocation is similar to the cluster study process used by the California Independent System Operator (CAISO): upgrade costs are allocated on a per MW basis to generators triggering each upgrade, short circuit upgrades are allocated based on short circuit duty contribution of each facility, and when a generator drops out, costs are re-allocated to remaining generators. SCE July 10, 2012 proposed DGSP outline at slide 6.

<sup>32</sup> On February 19, 2013, PG&E and SDG&E submitted a single filing, *Joint Distribution Group Study Tariff Filing of Pacific Gas and Electric Company and San Diego Gas & Electric Company*. In this filing, SDG&E explains that it supports the same proposal as PG&E.

*Filing of Pacific Gas and Electric Company and San Diego Gas & Electric Company.*

This document can be found at Attachment A.

### **2.3.3. SCE**

SCE also proposes to implement a Distribution Group Study Process. Its proposal is similar to PG&E's and SDG&E's proposal. Two noteworthy differences include: (1) SCE proposes not to rely on two annual fixed dates for establishing groups, as proposed by PG&E and SDG&E, but would determine the date to form a group when two or more projects apply to interconnect in the same electrical area, at a similar time, during the calendar year;<sup>33</sup> and (2) SCE proposes to process electrically interdependent Rule 21 and FERC-jurisdictional interconnection applicants separately, even if these applicants are electrically interdependent, while PG&E proposes to process all these applicants in the same study group.<sup>34</sup>

### **2.4. Distribution Group Study Process Furthers Commission Goals**

The two proposals, the joint proposal by PG&E and SDG&E and the separate proposal by SCE, are similar in most respects. Overall, we find that the key components of both proposals, such as the group study option, the defined timelines which conform to the Independent Study Process, and the cost

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<sup>33</sup> SCE July 10, 2012 proposed DGSP outline at slide 4; SCE February 19, 2013 *Proposed Rule 21 Tariff Language Implementing SCE's Distribution Group Study Process Proposal* at proposed tariff, sec. F.3.b.ii.(formation of distribution group and timing in application phase); SCE February 19, 2013 *Proposed Rule 21 Tariff Language Implementing SCE's Distribution Group Study Process Proposal* at proposed tariff, sec. F.3.B.ii.

<sup>34</sup> As previously noted, for PG&E to include federal wholesale tariff applicants, PG&E first must obtain the approval from FERC. PG&E August 21, 2012 comments at 2.

allocation method, all serve to promote our goal of a timely, non-discriminatory, cost-effective, and transparent interconnection process.

The Distribution Group Study Process will enable utilities to study multiple projects together as a group. As a result, the Distribution Group Study Process will likely promote timeliness by giving the utilities another tool to study the cumulative impacts of multiple requests for distribution interconnection that are located on the same distribution circuits in an efficient manner.

The Distribution Group Study Process will likely also promote a non-discriminatory process by applying the same standards of review to a group of projects rather than by evaluating each project serially, at a different point in time and under different circumstances.

In addition, the Distribution Group Study Process will likely be more cost-effective for applicants by creating a cost-sharing process for upgrade costs.

The goal of transparency will likely also be promoted by reducing the possibility of unanticipated costs being assigned to subsequent projects when, under the existing process, projects drop out of the queue or fail to complete upgrades.

In short, the inclusion of a Distribution Group Study Process in Rule 21 has the potential to increase the efficiency of the interconnection study process for applicants with electrically interdependent projects and offers a valuable opportunity for sharing upgrade costs across a greater number of projects.

Accordingly, PG&E, SCE, and SDG&E shall adopt a Distribution Group Study Process as part of Rule 21 as a reasonable means of promoting the goals of this rulemaking.

**2.5. Application Process and Open Windows**

PG&E and SDG&E suggest establishing two fixed-date, 30-day, open application windows per calendar year at six-month intervals for the submission of group study requests.<sup>35</sup> The dates for these open windows would be March 1-31 and September 1-30 but would be subject to change, with notice to the market, by utilities.

In contrast, SCE's proposal suggests opening a window for the submission of requests for the group study process upon receipt of a sufficient number of interdependent interconnection requests.<sup>36</sup> Under SCE's proposal, multiple windows could open each year but the number of open windows and the dates of these open windows would not be known in advance but would instead be dependent on the number of applications received and the location of the proposed projects.

Clean Coalition states that SCE's proposal offers the possibility of a shorter wait time before a study group is formed, perhaps even within 100 days.<sup>37</sup> However, Clean Coalition also states that SCE's proposal essentially presents a rolling-basis for interconnection request windows and fails to provide sufficient information for planning project development because it lacks sufficiently defined timelines.<sup>38</sup> In addition, Clean Coalition states that SCE's proposal provides the utility with excessive discretion on when to open a window for

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<sup>35</sup> PG&E June 10, 2012 proposed DGSP outline at slide 2.

<sup>36</sup> SCE June 10, 2012 proposed DGSP outline at slide 2.

<sup>37</sup> Clean Coalition July 31, 2012 comments at 3.

<sup>38</sup> Clean Coalition July 31, 2012 comments at 3.



requests to establish a group study process.<sup>39</sup> Clean Coalition further suggests that the level of discretion provided to SCE and the resulting uncertainty of a potential study process could discourage the development of distributed generation.<sup>40</sup>

In contrast, parties state that PG&E's and SDG&E's two open windows per calendar year for the formation of a study group increases certainty and transparency because applicants know that the group study process will be available twice a year.<sup>41</sup> More specifically, ORA<sup>42</sup> offers support for this aspect of PG&E's and SDG&E's proposal and notes that developers will benefit from the resulting certainty regarding the formation of distribution study groups to proceed with development.<sup>43</sup> Similarly, Sustainable Conservation supports PG&E's and SDG&E's proposal but also notes that the benefits of the increased certainty provided by the two annual open window schedule might be diminished by the inflexibility of the two pre-set dates for the open windows.<sup>44</sup>

Sustainable Conservation further states that SCE's proposal, while lacking fixed timelines, may be interpreted as an "as needed" approach to scheduling study groups and that the "as needed" approach might be more appropriate to a

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<sup>39</sup> SEIA July 31, 2012 comments at 2-3.

<sup>40</sup> SEIA July 31, 2012 comments at 2-3.

<sup>41</sup> SEIA July 31, 2012 comments at 2-3; Clean Coalition July 31, 2012 comments at 3.

<sup>42</sup> The Office of Ratepayer Advocates was formerly known as the Division of Ratepayer Advocates or DRA. The name of this division of the Commission was changed by legislation. Senate Bill 96 (Budget Act of 2013: public resources), Stats. 2013, ch. 356.

<sup>43</sup> ORA March 8, 2013 comments at 2-3.

<sup>44</sup> Sustainable Conservation August 21, 2012 comments at 1-2.

process where the formation of a study group is anticipated to be more the exception than the rule.<sup>45</sup>

SEIA, while supporting PG&E's and SDG&E's proposal of two open windows, suggests that four open windows might be preferable.<sup>46</sup>

SCE proposes that if the Commission prefers PG&E's and SDG&E's fixed-date bi-annual windows, that the time between application windows should be extended to eight months, instead of PG&E's and SDG&E's proposed six month intervals.<sup>47</sup> SCE states that, due to the volume of interconnection requests it receives, it would be more efficient to align the interval between the formation of the study groups to the existing interval for completing an Independent Study Process, which is eight months.<sup>48</sup>

Lastly, parties point out that uniformity across all three utilities in the area of Rule 21 will promote efficiencies in the industry.<sup>49</sup>

We find PG&E's and SDG&E's proposal of two open windows at fixed-dates during the calendar year provides the level of certainty needed by developers to adequately plan project development. This proposal is generally consistent with the Independent Study Process timeline and will not interfere with ongoing use of the Independent Study Process. We also find that PG&E's and SDG&E's proposal promotes transparency by providing a fixed schedule that is known in advance to the market.

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<sup>45</sup> Sustainable Conservation August 21, 2012 comments at 2.

<sup>46</sup> SEIA July 31, 2012 comments at 3-4.

<sup>47</sup> SCE August 21, 2012 comments at 4.

<sup>48</sup> SCE August 21, 2012 comments at 4.

<sup>49</sup> SEIA July 31, 2012 comments at 2-3.

While SCE's proposal provides the advantage of flexibility, it introduces uncertainty by not pre-establishing potential study group formation dates. We further find that advantages exist to the entire industry if all three utilities rely on the same fixed-date, open window proposal. Consistency in this aspect of the study process will further increase certainty and transparency. Regarding whether PG&E's reliance on six month intervals or SCE's alternative suggestion of relying on eight month intervals, is preferable, we find PG&E's suggested six-month interval adequately accommodates the other timelines, such as the Independent Study Process, but we will monitor this issue and revisit it if refinement to the intervals, as suggested by SCE, is warranted.

Accordingly, PG&E, SCE, and SDG&E shall file Tier 1 Advice Letters within 30 days of the effective date of today's decision with a Distribution Group Study Process that reflects PG&E's and SDG&E's February 19, 2013 draft tariff proposal and include the two fixed-date open windows each calendar year for receipt of requests for the group study process. These dates shall also be published at least 60 days in advance and displayed in a prominent location on their websites. The Tier 1 Advice Letters of PG&E, SCE, and SDG&E must be substantially similar to PG&E's and SDG&E's draft tariff proposal dated February 19, 2013, as modified by today's decision

## **2.6. Extensions to Study Timelines**

IREC and Clean Coalition state that further clarification is needed regarding the timeline applicable to the Distribution Group Study Process to restrict the utilities' ability to unduly extend the timelines.<sup>50</sup>

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<sup>50</sup> IREC March 8, 2013 comments at 4-5; Clean Coalition July 31, 2012 comments at 5-6.

As proposed by the utilities, the timeline for processing a group study would be the same as the timeline in Rule 21 applicable to the Independent Study Process.<sup>51</sup> Clean Coalition states that utilities should specifically identify in Rule 21 the circumstances within the context of a Distribution Group Study Process, as opposed to the Independent Study Process, that might trigger extensions to the timeline.<sup>52</sup> For example, Clean Coalition states that, among other things, the volume of study requests might result in the utility needing additional study time and, if so, information on the expected delays should be incorporated into Rule 21 to provide greater transparency.<sup>53</sup>

Sustainable Conservation agrees that any event allowing a utility to extend study timelines, in either the Independent Study Process or in the Distribution Group Study Process, should be clearly defined in advance in Rule 21. Sustainable Conservation adds that the Commission should impose a “meaningful consequence” on utilities for study results delays and establish a forum for developers to seek timely remedy for delay.<sup>54</sup>

PG&E acknowledges that circumstances may arise resulting in the need to extend timelines and that additional information on how this information will be communicated to applicants should be incorporated into Rule 21.<sup>55</sup>

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<sup>51</sup> See, e.g., PG&E Electric Tariff Rule 21 at F.3.d.ii (timeline for Independent Study Process).

<sup>52</sup> Clean Coalition July 31, 2012 comments at 5-6.

<sup>53</sup> Clean Coalition July 31, 2012 comments at 5-6.

<sup>54</sup> Sustainable Conservation August 21, 2012 comments at 2.

<sup>55</sup> PG&E August 21, 2012 comments at 6. See also, PG&E July 10, 2012 proposed DGSP outline at slides 3 and 9.

We find that lengthy and unanticipated extensions to timelines for completing interconnection requests reduces overall certainty and transparency of the study process. We find that further clarification of potential extension triggers for the Distribution Group Study Process is needed to promote a reasonable level of certainty and transparency in the process.

Accordingly, PG&E, SCE, and SDG&E shall file Tier 1 Advice Letters within 30 days of the effective date of today's decision with a Distribution Group Study Process that reflects PG&E's and SDG&E's February 19, 2013 draft tariff proposal and identifies some of the events that might trigger extensions to the Distribution Group Study Process timeline. This information shall include, but not necessarily be limited to: (1) the events resulting in extension; (2) the expected length of any extensions; and (3) the method to be relied upon to notify applicants of timeline extensions.

## **2.7. Electrical Interdependence**

Clean Coalition and Sustainable Conservation state that additional clarification is needed regarding how electrical interdependence is established by the utilities and how utilities propose to define a "group" for purposes of the Distribution Group Study Process.<sup>56</sup> Specifically, Clean Coalition states that Rule 21 should include a more detailed explanation of the parameters of a

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<sup>56</sup> Sustainable Conservation July 31, 2012 comments at 3 and Clean Coalition July 21, 2012 comments at 3-4, 7.

geographic area for each study group.<sup>57</sup> Vote Solar Initiative and Sierra Club make similar claims regarding the vagueness of the proposed terms.<sup>58</sup>

In response to the above concerns, both PG&E and SCE clarify that the terms “electrical areas” and “engineering judgment” mean the process described in Rule 21, Screen R, to determine if a project is interdependent with another earlier-queued interconnection request.<sup>59</sup> Specifically, with regard to the determination of electrical interdependence on the distribution system, Screen R provides as follows:

For Interconnection Requests that are electrically independent from the CAISO Controlled Grid, Distribution Provider will evaluate each Interconnection Request for known or reasonably anticipated relationships between the Interconnection Request and any earlier-queued interconnection requests in the DGSP, the Independent Study Process, or interconnection requests studied under predecessor interconnection procedures that have yet to complete their respective interconnection system impact study or Phase I interconnection study. Distribution Provider may conduct incremental power flow, aggregate power flow, and/or short-circuit duty tests using existing interconnection studies, Base Case data, overall system knowledge, and engineering judgment to determine whether an Interconnection Request can be studied independently of earlier-queued interconnection requests. If the Interconnection Request being evaluated for electrical independence on the Distribution System may be electrically related to earlier-queued interconnection requests that have

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<sup>57</sup> Clean Coalition July 31, 2012 comments at 4; Clean Coalition August 21, 2012 comments at 4.

<sup>58</sup> Sierra Club/Vote Solar Initiative July 31, 2012 comments at 3.

<sup>59</sup> SCE August 21, 2012 comments at 2; PG&E August 21, 2012 comments at 7.

yet to complete either interconnection system impact study or Phase I interconnection study, then it fails the evaluation of electrical independence for the Distribution System.

If Yes (pass), continue to Independent Study Process If No (fail), continue to the Distribution Group Study Process.<sup>60</sup>

PG&E and SCE propose to follow the above process without revision to determine whether the Distribution Group Study Process is needed for a particular project.<sup>61</sup> PG&E further states that, in general, areas where there may be interdependence between projects include distribution circuits, substation banks or substations.<sup>62</sup>

We find that no further revisions to Rule 21 are needed at this time to address the amount of information available to applicants regarding electrical interdependence on the distribution system. We find the terms “electrical area” and “engineering judgment” are sufficiently addressed in Rule 21 although every nuance of these terms is not explained. We also agree that, to a certain extent, the utilities’ subjective judgment is a necessary component of operating the distribution system.

Moreover, as applicants move through the stages in the interconnection process, applicants obtain more information. At these points, applicants can opt out of the Distribution Group Study Process with minimal negative consequences should unanticipated concerns arise. For example, the proposed Distribution Group Study Process permits applicants to withdraw from the group process at any point without responsibility for costs not incurred with the

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<sup>60</sup> See, e.g., PG&E Electric Tariff Rule 21 at sec. G.3.b.

<sup>61</sup> SCE August 21, 2012 comments at 2; PG&E August 21, 2012 comments at 7-8.

<sup>62</sup> PG&E August 21, 2012 comments at 8.

group,<sup>63</sup> provides applicants with the choice, in some situations, of whether to rely on the group study process or proceed individually,<sup>64</sup> and establishes a process for applicants to obtain all documents from the utility relevant to its interconnection process.<sup>65</sup>

We do find, however, as we gain experience with the Distribution Group Study Process, information sharing will likely facilitate a better understanding of the potential of the group study process.

Accordingly, PG&E, SCE, and SDG&E shall submit a quarterly report to the Commission, referred to as the Interconnection Data Quarterly Report, in January (October – December data), April (January – March data), July (April – June data), and October (July-September data). These reports shall include, among other things, information to support the utilities’ rationale for reliance on a group study process. Other components of these reports are addresses below. These reports shall be submitted to the Director of the Commission’s Energy Division.

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<sup>63</sup> See, e.g., Attachment A PG&E's and SDG&E's February 19, 2013 *Joint Distribution Tariff Filing* at proposed tariff at sec. F.3.b.xi: Certain funds would, however, be forfeited.

<sup>64</sup> See, e.g., Attachment A PG&E's and SDG&E's February 19, 2013 *Joint Distribution Tariff Filing* at proposed tariff at sec. F.3.b.iii: “At the Distribution Provider’s option, an Interconnection Request received during a particular Distribution Group Study Application window may be studied individually (Independent Study Process) or in a Distribution Group Study for the purpose of conducting one or more of the analyses forming the Interconnection Studies.”

<sup>65</sup> See, e.g., Attachment A PG&E's and SDG&E's February 19, 2013 *Joint Distribution Tariff Filing* at proposed tariff at sec. F.3.b.iv: “Upon request, Distribution Provider shall provide any Applicant in the Distribution Study Group all relevant supporting documentation...relevant to the Interconnection Request for the DGS Phase 1 Interconnection Study.”



## **2.8. Cost Sharing, Deposits, and Restudy Timeline**

IREC requests further clarification on: (1) the utilities' proposed cost allocation within the context of a group study; (2) the cost impact of an applicant withdrawing from the group study process; and (3) any resulting processing delays and modifications to existing timelines in the event of a restudy.<sup>66</sup> With respect to cost allocation to applicants within the same study group, IREC points out that the utilities use different terminology to describe cost allocation on the basis of each group member's contribution to the upgrade or on a pro rata per-megawatt basis.

Within the context of the study group, we find that all costs for required interconnection upgrades will be proportionally allocated among group applicants on a per kilowatt basis. Costs for upgrades will not be allocated based upon each applicant's specific contributions to a particular upgrade because this allocation method includes a degree of subjectivity that may not be conducive to the advancement of a Distribution Group Study Process. Although cost allocation within the group will not always align with cost contribution under a per kilowatt allocation methodology, the method is objective and easy to administer which will contribute to a transparent program and predictable outcomes. These shared costs will include any triggered distribution upgrades<sup>67</sup>

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<sup>66</sup> IREC March 8, 2013 comments at 6-8.

<sup>67</sup> See, e.g., PG&E Proposed Tariff at sec. E.4.e. The term "distribution upgrade" is defined in the tariff. At sec. E.4.e., the phrase "...or in the case of the Distribution Group Study Process, the responsibility of the triggering Interconnection Request(s) requires clarification to align with the methodology adopted today.

and network upgrades.<sup>68</sup> The possible types of shared costs must be described or referenced in Rule 21 and should be found in a single location in the tariff.

In addition, in an effort to minimize the financial unknowns and delays within the group context, we find it reasonable to mitigate the financial impact on the group due to applicants dropping out of the group study process. Deposit funds will be forfeited in the event an applicant withdraws and funds shall be used to mitigate the expense of restudies, if needed. Forfeited funds shall also be used to mitigate any future group expenses. At the conclusion of the group study process, any remaining forfeited funds shall be reallocated among remaining applicants on a per kilowatt basis. The same approach will apply to deposits if an applicant drops out of the group after construction occurs or at any other point in the group study process. Tariffs must include provisions on this topic. All forfeiture dates and timelines must be explained in Rule 21. In the event a restudy is needed due to an applicant dropping out of the group study process, restudies must be completed within 60 days to promote our goal of timeliness.

As discussed in more detail later in this decision, where possible, the language and structure of Rule 21 should be consistent across the utilities' tariffs. As such, language on similar topics, such as the cost issues discussed herein, should be placed in the same location under each tariff.

Accordingly, PG&E, SCE, and SDG&E shall file Tier 1 Advice Letters within 30 days of the effective date of today's decision with a Distribution Group Study Process that reflects PG&E's and SDG&E's February 19, 2013 draft tariff

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<sup>68</sup> The term "network upgrade" is defined in the proposed tariff.

modified to indicate the type of costs triggered by applicants within a group study and whether these costs will be allocated on a per kilowatt basis or born by the individual applicant. Tariffs shall indicate that shared costs within the group study shall be allocated on a per kilowatt basis. Tariffs shall also incorporate a 60-day re-study timeline in the event an applicant drops out of the group study process and that deposits will be forfeited and distributed to the group to mitigate future expenses in the event an applicant drops out of the group study process. At the conclusion of the group study process, any remaining forfeited funds shall be reallocated among remaining applicants on a per kilowatt basis. A timeline identifying the amount of the deposit and at what point in the process funds are forfeited shall also be incorporated into the tariff.

### **2.9. Transition Plan and Tariff**

PG&E's initial July 10, 2012 proposal for a Distribution Group Study Process includes a reference to a transition plan.<sup>69</sup> We find that a transition plan should be included in Rule 21 to ensure the orderly transition of any pending applications to the group study process.

Accordingly, PG&E, SCE, and SDG&E shall file Tier 1 Advice Letters within 30 days of the effective date of today's decision with a Distribution Group Study Process that reflects PG&E's and SDG&E's February 19, 2013 draft tariff modified to include a transition plan that indicates which applicants, by application date, queue number, or other clear demarcation, may opt to move into the first study group which opens after the effective date of this decision and the process for selecting this option, including the notification process, the

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<sup>69</sup> PG&E July 10, 2012 proposed DGSP outline at slide 18; PG&E August 21, 2012 comments at 7.

related fees, and any other administrative details. Any deadlines for pending applicants to select the first study group which opens after the effective date of this decision shall be clearly stated.

### **2.10. Future Review**

SEIA recommends that after parties experience how the Distribution Group Study Process functions, the Commission adopt a schedule for revisiting the topics addressed in today's decision to identify the successes of the Distribution Group Study Process and, in addition, the areas needing improvement. In response, SCE suggests that informal working groups could more readily address issues as they arise.<sup>70</sup>

In an effort to achieve our goals to "ensure that the interconnection process is timely, non-discriminatory, cost-effective, and transparent," the Commission finds that reviewing the successes and deficiencies of the interconnection process adopted today is warranted. We find that an informal Rule 21 working group is an appropriate forum. At the appropriate time, parties can bring the issues to the Commission if further direction is needed. We direct the involvement of the Commission's Energy Division in the Rule 21 working group to ensure the Commission is timely informed of on-going developments.

Accordingly, PG&E, SCE, and SDG&E shall convene an informal working group within 12 months after the effective date of the Tier 1 Advice Letter to review the Distribution Group Study Process. Further meetings may be held at the discretion of the working group. The Commission directs the Energy Division to participate in this working group. PG&E, SCE, and SDG&E together

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<sup>70</sup> SCE August 21, 2012 comments at 5.

with the Energy Division shall prepare a report based on information obtained during the working group to evaluate how the DGSP ensures that the interconnection process is timely, non-discriminatory, cost-effective, and transparent.

### **3. Rule 21 Standardized Agreement Forms**

Today's decision adopts the following Rule 21 agreement forms and directs PG&E, SCE, and SDG&E to file these forms as revisions to Rule 21 by Tier 1 Advice Letters: (1) Rule 21 Generator Interconnection Agreement for Exporting Generation Facilities Interconnecting Under the Transmission Cluster Study or Independent Study Process; (2) Rule 21 Independent Study Process Study Agreement; and (3) Rule 21 Pre-Application Report Request. These forms reflect the revisions approved to Rule 21 in D.12-09-018. These forms should be further revised to reflect the revisions to Rule 21 adopted today. As proposed, the forms for PG&E, SCE, and SDG&E are substantially the same. For illustrative purposes, the forms proposed by PG&E are attached hereto at Attachment B.

#### **3.1. Procedural Background**

The Settlement Agreement submitted to the Commission for approval on March 16, 2012 and adopted by the Commission in D.12-09-018 included two form agreements: (1) the Rule 21 Generator Interconnection Agreement for Exporting Generating Facilities Interconnection Under the Fast Track Process; and (2) the Rule 21 Exporting Generating Facility Interconnection Request.

Due to the parties' desire to expedite the settlement process, the Settlement Agreement was filed without a standardized interconnection agreement for exporting generating facilities interconnecting under either the Transmission Cluster Study Process or the Independent Study Process. The Settlement Agreement also did not include a pre-application report request form. These

three additional documents, which reflect the revisions to Rule 21 approved in D.12-09-018, will facilitate the successful implementation of the recent revisions to Rule 21.

The utilities informally circulated drafts of their forms by electronic mail to the service list on June 1, 2012.<sup>71</sup> Parties filed comments on June 8, 2012. PG&E, SCE, and SDG&E filed reply comments on July 12, 2012 and then filed their forms, revised in response to comments, on June 15, 2012.<sup>72</sup>

### **3.2. Utilities' Proposals - Forms**

Pursuant to a directive in the April 20, 2012 ALJ Ruling, the utilities each filed three forms for consideration by the Commission. These forms include the following: (1) Rule 21 Generator Interconnection Agreement for Exporting Generation Facilities Interconnecting Under the Transmission Cluster Study or Independent Study Process; (2) Rule 21 Independent Study Process Study Agreement; and (3) Rule 21 Pre-Application Report Request.

### **3.3. Comments**

On July 2, 2012, three parties filed comments on the June 15, 2012 proposed forms submitted by the utilities, WalMart Stores, Inc. and Sam's West, Inc. (WalMart/Sam's West) and California Energy Storage Alliance (CESA).

CESA makes no comments on the substance of the proposed forms and instead comments on the extent to which the Commission may also be

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<sup>71</sup> *Administrative Law Judge's Ruling Granting the Motion of Vote Solar* (April 20, 2012) at 5. The utilities circulated drafts to the service list consistent with a directive in the April 20, 2012 ALJ Ruling.

<sup>72</sup> *SCE's Motion to Adopt Pro Forma Documents* (June 15, 2012); *PG&E's Pro Forma Agreement Filing* (June 15, 2012); *SDG&E's Motion to Adopt Standardized Pro Forma Rule 21 Documents* (June 15, 2012).

addressing storage issues in this proceeding.<sup>73</sup> CESA's issues are not relevant to the issues framed now in this proceeding and are, therefore, not discussed further.

WalMart/Sam's West requests that the Commission modify the indemnity provisions in the proposed interconnection documents to account for its practice of contracting with third-parties to install energy generation and storage facilities on its commercial facilities.<sup>74</sup>

On July 12, 2012, all three utilities, PG&E, SCE, and SDG&E, filed reply comments. The utilities state, among other things, that WalMart/Sam's West request to modify the indemnity clause is procedurally inappropriate because the Commission agreed to the terms of the provision in D.12-09-018 when adopting the Settlement Agreement.<sup>75</sup> Moreover, the utilities state that the modification proposed by WalMart/Sam's West introduces uncertainty into the contracting process between an applicant and a utility and, in addition, will shift potential costs to ratepayers by potentially placing liability on unknown third-party contractors.<sup>76</sup>

### **3.4. Discussion**

We have reviewed the proposed forms filed by the utilities on July 15, 2012 and find that the proposed forms are consistent with Rule 21, as adopted in

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<sup>73</sup> CESA July 2, 2012 comments at 3-4.

<sup>74</sup> WalMart/Sam's West July 2, 2012 comments at 3.

<sup>75</sup> PG&E July 12, 2012 reply comments at 2-3, SDG&E July 12, 2012 reply comments at 2; SCE reply comments at 4.

<sup>76</sup> PG&E July 12, 2012 reply comments at 2-3; SDG&E July 12, 2012 reply comments at 2; SCE reply comments at 4.

D.12-09-018. We find that approval of these forms will facilitate our goals of a timely, non-discriminatory, cost-effective, and transparent interconnection process. Timeliness is promoted as the forms will be readily available so as to prevent delays. Discrimination among applicants will be prevented because the forms will be standardized for all applicants. Cost-effectiveness will be promoted as parties will not need to negotiate the terms of these agreements on a case-by-case basis and transparency will also be realized by including the forms as part of the publicly available terms and conditions within Rule 21.

Regarding the modifications proposed by WalMart/Sam's West, we do not accept these modifications because, under the WalMart/Sam's West request, ratepayers will be disadvantaged should the utility be required to collect funds from a third-party contractor rather than directly from the customer/developer.

Accordingly, PG&E, SCE, and SDG&E shall file Tier 1 Advice Letters within 30 days of the effective date of today's decision with a Distribution Group Study Process that reflects PG&E's and SDG&E's February 19, 2013 draft tariff proposal and includes the following forms adopted today: (1) Rule 21 Generator Interconnection Agreement for Exporting Generation Facilities Interconnecting under the Transmission Cluster Study or Independent Study Process; (2) Rule 21 Independent Study Process Study Agreement; and (3) Rule 21 Pre-Application Report Request. PG&E, SCE, and SDG&E shall make additional efforts, as warranted, to make their forms substantially similar in format and substance prior to filing the Advice Letters and shall incorporate revisions into the forms, as needed, to conform the revisions to Rule 21 regarding the Distribution Group Study Process adopted today. After the Commission adopts these forms by the advice letter process, modification to these tariff forms is only permitted with Commission approval through the advice letter process.



**4. Uniformity between Utility Tariffs**

As stated above, the inclusion of Distribution Group Study Process in Rule 21 has the potential to increase the efficiency of the interconnection study process for applicants with electrically interdependent projects and offers a valuable opportunity for sharing upgrade costs across a greater number of developers.

Unnecessary differences between the tariffs may detract from gains in efficiency and transparency. Consistency across the three utilities may also reduce the opportunity for confusion and minimize the number of disputes that may arise as a result.<sup>77</sup> Consistency also will enable the Commission to more reasonably evaluate the effect that different factors may have on the interconnection process.<sup>78</sup>

PG&E, SCE, and SDG&E shall make additional efforts, as warranted, to make their forms substantially similar in format and substance prior to filing the Tier 1 Advice Letters and to incorporate revisions into the forms, as needed, to conform to the revisions to Rule 21 adopted today regarding the Distribution Group Study Process.

**5. Uniformity with Federal Wholesale Tariffs**

In D.12-09-018 we found that the public interest would be furthered by the utilities seeking FERC approval to achieve greater uniformity between state and federal interconnection regulations.<sup>79</sup> Greater uniformity across jurisdictions

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<sup>77</sup> IREC March 8, 2013 comments at 2-3.

<sup>78</sup> IREC March 8, 2013 comments at 2-3.

<sup>79</sup> D.12-09-018 at 35-36. FERC recently adopted *Small Generator Interconnection Agreements and Procedures*, 145 FERC ¶ 61,159 on November 22, 2013 which results in,

*Footnote continued on next page*

regarding interconnection rules has the potential to increase the goals of this rulemaking, to ensure that interconnection is “timely, non-discriminatory, cost-effective, and transparent.” Today, we again encourage the utilities to pursue this goal of uniformity across state and federal interconnection rules.

## **6. Rule 21 Data Management**

Several parties recommend that the Commission direct the utilities to provide additional public information on the interconnection process to inform enhancements in the process.<sup>80</sup>

We find that additional information will promote improvements in the process and assist the Commission in evaluating the interconnection process established by Rule 21. Therefore, we direct PG&E, SCE, and SDG&E to submit data in a quarterly report to the Commission, referred to as Interconnection Data Quarterly Report.

Accordingly, PG&E, SCE, and SDG&E shall submit a quarterly report to the Commission, the Interconnection Data Quarterly Report. The submission of this data may include both public and confidential data. These reports shall include, among other things, compliance with Rule 21 timelines, interconnection upgrade cost estimates for projects in the Independent Study Process and the DGSP, account true-up data for interconnection cost estimates, an accounting of all exemptions from Rule 21 interconnection fees, including the value of those exemptions, and the number of Rule 21 projects at each step of the Rule 21 process. These reports shall be submitted to the Director of the Commission’s

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among other things, increased uniformity between federal rules to the existing provisions of Rule 21, as set forth in D.12-09-018.

<sup>80</sup> Clean Coalition October 26, 2010 comments at 2.

Energy Division in a format prepared by Energy Division. Upon request by Energy Division, PG&E, SCE, and SDG&E shall assist Energy Division to develop this format.

## **7. Other Minor Changes to Rule 21**

PG&E, SCE, and SDG&E are directed to make certain minor changes to Rule 21 to promote the accessibility of the tariffs.

The utilities are directed to incorporate cross references into Rule 21 to indicate the location and name of all the appropriate forms.

Utilities are also directed to include more specific identification of behind the meter components on their interconnection application forms.

Additionally, utilities are directed to provide applicants with the option of requesting the utility to determine whether the proposed interconnection will require a Direct Transfer Trip. This request should be included as part of the pre-application report request or supplemental review process and may include an associated cost.

These changes shall be included in the Tier 1 Advice Letter filing required by today's decision. Additional changes to promote the general accessibility of Rule 21 are encouraged and may be included in this same Advice Letter filing.

## **8. Motions**

David Davis filed a *Motion for Party Status* on July 30, 2012. SCE filed a response on August 14, 2012. We grant this motion to the extent that David Davis seeks to address matters identified within the scope of this proceeding and in accordance with the schedule of this proceeding. All other motions for party status are granted. We further confirm all prior rulings by the ALJ.

**9. Pending Issues in R.11-09-011**

The September 26, 2012 scoping memo in this proceeding, *Assigned Commissioner's Amended Scoping Memo and Ruling Requesting Comments*, set a schedule that included several pending issues. The issue of *Interconnection Cost Responsibility* was scheduled to be addressed by a proposed decision in the 2<sup>nd</sup> quarter of 2013. The issue of *Technical Operating Standards* was scheduled to be addressed by a proposed decision in the 4<sup>th</sup> quarter of 2013. As we reach the end of 2013, we note that both of these issues will instead be addressed in 2014.

**10. Comments on Proposed Decision**

The proposed decision of the Administrative Law Judge in this matter was mailed to the parties in accordance with Section 311 of the Public Utilities Code and comments were allowed under Rule 14.3 of the Commission's Rules of Practice and Procedure. Comments were filed on \_\_\_\_\_, and reply comments were filed on \_\_\_\_\_ by \_\_\_\_\_.

**11. Assignment of Proceeding**

Michel Peter Florio is the assigned Commissioner and Regina DeAngelis is the assigned ALJ in this proceeding.

**Findings of Fact**

1. The Distribution Group Study Process in Rule 21 will likely promote timeliness by giving the utilities another tool to study the cumulative impacts of multiple requests for distribution interconnection that are located on the same distribution circuits in an efficient manner.

2. The Distribution Group Study Process in Rule 21 will likely promote a non-discriminatory process by applying the same standards of review to a group

of projects rather than evaluating each project serially, at a different point in time under different circumstances.

3. The Distribution Group Study Process in Rule 21 will likely be more cost-effective for applicants by creating a cost-sharing process for upgrade costs.

4. The goal of transparency in Rule 21 will likely be promoted by the Distribution Group Study Process because it reduces the possibility of unanticipated costs being assigned to subsequent projects.

5. The Rule 21 Distribution Group Study Process will likely increase the efficiency of the interconnection study process for applicants with electrically interdependent projects and offers a valuable opportunity for sharing upgrade costs across a greater number of projects.

6. Uniformity across all three utilities in the area of Rule 21 promotes efficiencies in the industry.

7. PG&E's and SDG&E's proposal of two open windows at fixed-dates during the calendar year for the Rule 21 Distribution Group Study Process provides the level of certainty needed by developers to adequately plan project development.

8. PG&E's and SDG&E's proposal of two open windows at fixed-dates during the calendar year for the Rule 21 Distribution Group Study Process is consistent with the Independent Study Process timeline and will not interfere with ongoing use of the Independent Study Process.

9. PG&E's and SDG&E's proposal of two open windows at fixed-dates during the calendar year promotes transparency of Rule 21 by providing a fixed schedule that is known to the public.

10. Advantages exist to the entire industry if all three utilities rely on the same fixed-date, open window proposal since consistency in this aspect of the study process further increases the certainty and transparency of Rule 21.

11. Lengthy unanticipated extensions to timelines for completing interconnection requests under Rule 21 reduce overall certainty and transparency of the group study process.

12. Further clarification of potential extension triggers under the Rule 21 DGSP is needed to promote a reasonable level of certainty and transparency in the process.

13. More information regarding costs and timelines becomes available to applicants later in the Rule 21 interconnection process and applicants retain the option to opt out of the group study process.

14. The terms “electrical area” and “engineering judgment” are sufficiently addressed in Rule 21 although every nuance of these terms is not explained.

15. Utilities’ subjective judgment is a necessary component of operating a distribution system.

16. Information sharing regarding the Distribution Group Study Process will facilitate a better understanding of the potential of the group study process under Rule 21.

17. Additional information regarding the Rule 21 interconnection process will promote improvements in the process and assist the Commission in evaluating the interconnection process established by Rule 21.

18. The utilities’ July 15, 2012 proposed forms are consistent with Rule 21, as adopted in D.12-09-018.

19. The proposed Rule 21 forms promote timeliness as the forms will be readily available so as to prevent delays.

20. Cost allocation should be more clearly addressed in the Rule 21 Distribution Group Study Process to promote the Commission's goals in this proceeding.

21. Shared costs within the study group will be allocated on a per kilowatt basis.

22. Financial unknowns and delays may occur when applicants drop out of the group study process

23. A transition plan should be included in Rule 21 to ensure the orderly transition of any pending applications to the group study process.

24. The proposed Rule 21 forms prevent discrimination among applicants because the forms are standardized for all applicants.

25. Cost-effectiveness will be promoted by the proposed Rule 21 forms as parties will not need to negotiate the terms of these agreements on a case-by-case basis and transparency will also be realized by including the forms as part of the publicly available terms and conditions within Rule 21.

26. The modifications to the proposed Rule 21 forms suggested by WalMart/Sam's West will disadvantage ratepayers should the utility be required to collect funds from third-party contractors rather than directly from the customer/developer.

27. Minor changes to Rule 21 are needed to improve its accessibility. Additional changes to promote the general accessibility of Rule 21 are encouraged and may be included in the Tier 1 Advice Letter filing.

28. The schedule of this proceeding as adopted in the September 26, 2012 *Assigned Commissioner's Amended Scoping Memo and Ruling Requesting Comments* is no longer accurate.

**Conclusions of Law**

1. The adoption of PG&E's and SDG&E's proposal for incorporating a Distribution Group Study Process into Rule 21 will facilitate the Commission's goals to "ensure that the interconnection process is timely, non-discriminatory, cost-effective, and transparent."
2. The adopting of the same group study process for PG&E, SDG&E and SCE will facilitate the Commission's goals to "ensure that the interconnection process is timely, non-discriminatory, cost-effective, and transparent."
3. The proposed Rule 21 forms facilitate the Commission's goals to "ensure that the interconnection process is timely, non-discriminatory, cost-effective, and transparent."
4. The modifications to the proposed forms suggested by WalMart/Sam's West are not accepted because the modifications will disadvantage ratepayers should the utility be required to collect funds from third-party contractors rather than directly from the customer/developer.
5. No further revisions to Rule 21 are needed at this time to address the amount of information available to applicants regarding electrical distribution interdependence between projects.
6. A per kilowatt cost allocation methodology for shared costs is reasonable although cost allocation will not always align with cost contribution under Rules 21 because a per kilowatt method is objective and easy to administer, which will contribute to a transparent program and predictable outcomes.
7. To mitigate the financial unknowns and delays that may occur when applicants drop out of the group study process, it is reasonable to require deposits to be forfeited to mitigate the expense of restudies, if needed, with remaining forfeited funds reallocated among applicants on a per kilowatt basis at



the conclusion of the study process. The same approach should apply to funds if an applicant drops out after construction occurs or at any other point in the process.

8. A transition plan for moving pending applications into the group study process will ensure the orderly transition of any pending applications to the group study process and should be incorporated into Rule 21.

9. PG&E, SCE, and SDG&E should submit interconnection data to Energy Division in a quarterly report, referred to as the Interconnection Data Quarterly Report, because additional information regarding the Rule 21 interconnection process will promote improvements in the process and assist the Commission in evaluating the interconnection process established by Rule 21.

10. All motions for party status are granted with the motion for party status filed by David Davis being granted to the extent David Davis seeks to address matters identified within the scope of this proceeding and in accordance with the schedule of this proceeding.

11. Minor changes to Rule 21 will improve its accessibility and should be included in the Tier 1 Advice Letter filing required by today's decision. Additional changes to promote the general accessibility of Rule 21 are encouraged and may be included in this same Advice Letter filing.

12. The schedule of this proceeding should be revised to more accurately reflect the status of this proceeding.

**O R D E R****IT IS ORDERED** that:

1. Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E) shall file Tier 1 Advice Letters within 30 days of the effective date of today's decision to incorporate a Distribution Group Study Process into Electric Tariff Rule 21 (Rule 21). These advice letter filings shall substantially follow the terms and conditions set forth in PG&E's and SDG&E's February 19, 2013 draft tariff proposal and shall also:

- a) be substantially similar in substance and format;
- b) include two fixed-date open windows each calendar year for receipt of requests for the group study process, and these open window dates shall be published at least 60 days in advance in a prominent location on their websites;
- c) identify the events that may trigger extensions to the Distribution Group Study Process timeline and displayed and include (1) the events resulting in extensions, (2) the expected length of the extensions, and (3) the method to be relied upon to notify group study applicants of timeline extensions;
- d) indicate the type of costs potentially triggered by applicants within a group study and whether these identified costs are shared costs to be allocated on a per kilowatt basis or born by the individual applicant;
- e) incorporate a timeline identifying the amount of any required deposit and at what point in the process deposits are forfeited if an applicant drops out of the group, a 60-day re-study timeline in the event a re-study is required after an applicant drops out of the

group, and that forfeited funds return to the group to cover future expenses in the event an applicant drops out of the group with any funds remaining at the conclusion of the group study process being allocated to individual applicants in the group on a per kilowatt basis;

- f) incorporate minor changes into Rule 21 as follows:
  - (1) cross references to indicate the location and name of all the appropriate forms, (2) more specific identification of behind the meter components on their interconnection application forms, and (3) a modification to the pre-application report request or supplemental review process, which may include an associated cost, to provide applicants with the option of requesting the utility to determine whether the proposed interconnection requires a Direct Transfer Trip; and
- g) include a transition plan that indicates (1) which pending applicants, by application date, queue number, or other clear demarcation, can select the first study group which opens after the effective date of this decision, (2) the process for selecting this option, including the notification process, the related fees, and other administrative details, and (3) any other deadlines for selecting to be in the first study group which opens after the effective date of this decision.

2. Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E) shall convene an informal working group within 12 months after the effective date of the Tier 1 Advice Letters referred to in Ordering Paragraph 1 to review the Distribution Group Study Process. Further meetings may be held at the discretion of the working group. The Commission directs the Energy Division to participate in this working group. PG&E, SCE, and SDG&E together with the Energy Division shall prepare a report based on information obtained during the working group

to evaluate how the Distribution Group Study Process ensures that the interconnection process is timely, non-discriminatory, cost-effective, and transparent.

3. Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E) shall submit a quarterly report to the Commission, referred to as the Interconnection Data Quarterly Report, in January (October – December data), April (January – March data), July (April – June data), and October (July-September data). These reports shall be submitted to the Director of the Commission’s Energy Division in a format prepared by Energy Division. Upon the request of Energy Division, PG&E, SCE, and SDG&E shall assist Energy Division to develop this format. This report shall be submitted for a two-year period, starting from the effective date of this decision, and further reports are required only at the direction of the Director of the Commission’s Energy Division.

4. The Interconnection Data Quarterly Report, referred to in Ordering Paragraph 3 herein, shall include, information to support the utilities’ rationale for reliance on a group study process. Reports may be both public and confidential. Reports shall also include, among other things, compliance with Electric Tariff Rule 21 (Rule 21) timelines, interconnection upgrade cost estimates for projects in the Independent Study Process and the Distribution Group Study Process, account true-up data for interconnection cost estimates, an accounting of all exemptions from Rule 21 interconnection fees, including the value of those exemptions, and the number of Rule 21 projects at each step of the Rule 21 process. Energy Division may require additional information to be included in these reports.

5. Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E) shall include in the Tier 1 Advice Letters to be filed within 30 days of the effective date of today's decision with a Distribution Group Study Process, as referred to in Ordering Paragraph 1, the following forms adopted today: (1) Electric Tariff Rule 21 (Rule 21) Generator Interconnection Agreement for Exporting Generation Facilities Interconnecting Under the Transmission Cluster Study or Independent Study Process; (2) Rule 21 Independent Study Process Study Agreement; and (3) Rule 21 Pre-Application Report Request. PG&E, SCE, and SDG&E shall make additional efforts, as warranted, to make their forms substantially similar in format and substance prior to filing the Advice Letters and to incorporate revisions into the forms, as needed, to conform to the revisions to Rule 21 adopted today regarding the Distribution Group Study Process. Modification to these final tariff forms is only permitted with prior Commission approval through the advice letter process.

6. Rulemaking 11-09-011 remains open.

This order is effective today.

Dated \_\_\_\_\_, at San Francisco, California.

# **ATTACHMENT A**



**FILED**

02-19-13  
04:59 PM

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking on the Commission's own motion to improve distribution level interconnection rules and regulations for certain classes of electric generators and electric storage resources.

Rulemaking 11-09-011  
(Filed September 22, 2011)

**JOINT DISTRIBUTION GROUP STUDY TARIFF FILING OF  
PACIFIC GAS AND ELECTRIC COMPANY (U 39 E) AND  
SAN DIEGO GAS & ELECTRIC COMPANY (U 902 E)**

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**February 19, 2013**

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking on the Commission's own motion to improve distribution level interconnection rules and regulations for certain classes of electric generators and electric storage resources.

Rulemaking 11-09-011  
(Filed September 22, 2011)

**JOINT DISTRIBUTION GROUP STUDY TARIFF FILING OF  
PACIFIC GAS AND ELECTRIC COMPANY (U 39 E) AND  
SAN DIEGO GAS & ELECTRIC COMPANY (U 902 E)**

**I. INTRODUCTION**

Pacific Gas and Electric Company (PG&E) makes this filing on behalf of itself and San Diego Gas & Electric Company (SDG&E) pursuant to Rule 9.1 of the California Public Utilities Commission ("Commission" or "CPUC") Rules of Practice and Procedure and in compliance with Administrative Law Judge DeAngelis's December 12, 2012 email. Following up on the workshop, proposals and comments regarding a Rule 21 Distribution Group Study Process (DGSP) submitted last summer, PG&E and SDG&E provide draft tariff language for the Commission's consideration.

**II. DRAFT TARIFF LANGUAGE IMPLEMENTING UPDATED DGSP PROPOSAL**

The attached draft tariff language is based on the DGSP proposal filed by PG&E on July 10, 2012. This tariff will continue to be a work in progress and PG&E and SDG&E anticipate that revisions will continue to be made following the workshops and comments anticipated in the coming months. In addition there will likely be some adjustments needed given the interaction between Rule 21 and wholesale distribution tariff (WDT and WDAT for PG&E and SDG&E, respectively) projects that may be electrically interdependent. Of particular concern is the need to accommodate completion of the electric independence test for all projects entering both group processes at the same time that may be electrically interdependent. Given the potential for a



timeline squeeze, particularly in the first DGSP window of the year, PG&E and SDG&E have added language regarding the Distribution Group Study (DGS) Phase one study start date to the scoping meeting agenda items.<sup>1</sup> Throughout the attached document new language is indicated in redline format on PG&E's CPUC approved Rule 21 (Rule 21)<sup>2</sup>.

### III. CONCLUSION

PG&E and SDG&E look forward to Commission approval of their joint DGSP proposal.

Respectfully submitted,

RANDALL J. LITTENEKER  
STACY W. WALTER

By: \_\_\_\_\_/s/\_\_\_\_\_  
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**On Behalf of the Joint Parties:**  
Pacific Gas and Electric Company (U 39-E);  
San Diego Gas & Electric Company (U 902-E).

February 19, 2013

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<sup>1</sup> This language is included in new subsection F.3.b.(ii)(v).

<sup>2</sup> PG&E's and SDG&E's Rule 21 tariffs are substantially the same and upon approval of this proposal by the CPUC, SDG&E would incorporate the redlined tariff language into its tariff.

## ATTACHMENT



**Pacific Gas and Electric Company**  
 San Francisco, California  
 U 39

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Cal. P.U.C. Sheet No.  
 Cal. P.U.C. Sheet No.

31865-E\*  
 30177-E

**ELECTRIC RULE NO. 21**  
 GENERATING FACILITY INTERCONNECTIONS

Sheet 1

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30178-E

**ELECTRIC RULE NO. 21**  
GENERATING FACILITY INTERCONNECTIONS

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**GENERATING FACILITY INTERCONNECTIONS**

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30180-E

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**GENERATING FACILITY INTERCONNECTIONS**

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**GENERATING FACILITY INTERCONNECTIONS**

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30182-E

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**GENERATING FACILITY INTERCONNECTIONS**

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30184-E

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**ELECTRIC RULE NO. 21**  
 GENERATING FACILITY INTERCONNECTIONS

Sheet 11

**B. APPLICABILITY**

(N)

**1. APPLICABILITY**

This Rule describes the Interconnection, operating and Metering requirements for those Generating Facilities to be connected to Distribution Provider's Distribution System and Transmission System over which the California Public Utilities Commission (Commission) has jurisdiction. All Generating Facilities seeking Interconnection with Distribution Provider's Transmission System shall apply to the California Independent System Operator (CAISO) for Interconnection and be subject to CAISO Tariff except for 1) Net Energy Metering Generating Facilities and 2) Generating Facilities that do not export to the grid or sell any exports sent to the grid (Non-Export Generating Facilities). NEM Generating Facilities and Non-Export Generating Facilities subject to Commission jurisdiction shall interconnect under this Rule regardless of whether they interconnect to Distribution Provider's Distribution or Transmission System. Subject to the requirements of this Rule, Distribution Provider will allow the Interconnection of Generating Facilities with its Distribution or Transmission System.

Generating Facility interconnections to Distribution Provider's Distribution System that are subject to Federal Energy Regulatory Commission (FERC) jurisdiction shall apply under Distribution Provider's Wholesale Distribution Tariff (WDT) whether they interconnect to Distribution Provider's Distribution or Transmission System.

**2. DEFINITIONS**

Capitalized terms used in this Rule, and not defined in Distribution Provider's other tariffs shall have the meaning ascribed to such terms in Section C of this Rule. The definitions set forth in Section C of this Rule shall only apply to this Rule, the Interconnection Request, study agreements and Generator Interconnection Agreements, and may not apply to Distribution Provider's other tariffs.

(N)

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**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 12

## B. APPLICABILITY (Cont'd.)

(N)

## 3. APPLICABLE CODES AND STANDARDS

This Rule has been harmonized with the requirements of American National Standards Institute/Institute of Electrical and Electronic Engineers (ANSI/IEEE) 1547-2003 Standards for Interconnecting Distributed Resources with Electric Power Systems. In some sections, IEEE 1547 language has been adopted directly, in others, IEEE 1547 requirements were interpreted and this Rule's language was changed to maintain the spirit of both documents.

The language from IEEE 1547 that has been adopted directly (as opposed to paraphrased language or previous language that was determined to be consistent with IEEE 1547) is followed by a citation that lists the clause from which the language derived. For example, IEEE 1547-4.1.1 is a reference to Clause 4.1.1.

In the event of any conflict between this Rule, any of the standards listed herein, or any other applicable standards or codes, the requirements of this Rule shall take precedence.

## C. DEFINITIONS

The definitions in this Section C are applicable only to this Rule, the Interconnection Request, Study Agreements and Generator Interconnection Agreements.

**Added Facilities:** See Special Facilities.

**Affected System:** An electric system other than Distribution Provider's Distribution or Transmission System that may be affected by the proposed Interconnection.

**Affected System Operator:** The entity that operates an Affected System.

**Affiliate:** With respect to a corporation, partnership or other entity, each such other corporation, partnership or other entity that directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, such corporation, partnership or other entity.

**Allocated Capacity:** Existing aggregate generation capacity in megawatts (MW) interconnected to a substation/area bus, bank or circuit (i.e., amount of generation online).

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Advice Letter No. 4110-E  
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Regulatory Relations

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Cal. P.U.C. Sheet No.31877-E  
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**ELECTRIC RULE NO. 21**  
GENERATING FACILITY INTERCONNECTIONS

Sheet 13

## C. DEFINITIONS (Cont'd.)

(N)

**Anti-Islanding:** A control scheme installed as part of the Generating or Interconnection Facility that senses and prevents the formation of an Unintended Island.

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**Applicant:** The entity submitting an Interconnection Request pursuant to this Rule.

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**Application:** See Interconnection Request.

**Available Capacity:** Total Capacity less the sum of Allocated Capacity and Queued Capacity.

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**Base Case:** Data including, but not limited to, base power flow, short circuit and dynamic/stability data bases, underlying load, generation, and transmission facility assumptions, contingency lists, including relevant special protection systems, and transmission diagrams used to perform the Interconnection Studies. The Base Case may include Critical Energy Infrastructure Information (as that term is defined by FERC). The Base Case shall include (a) transmission facilities as approved by Distribution Provider or CAISO, as applicable, (b) planned Distribution Upgrades that may have an impact on the Interconnection Request, (c) Distribution Upgrades and Network Upgrades associated with generating facilities in (iv) below, and (d) generating facilities that (i) are directly interconnected to the Distribution System or CAISO Controlled Grid; (ii) are interconnected to Affected Systems and may have an impact on the Interconnection Request; (iii) have a pending request to interconnect to the Distribution System or an Affected System; or (iv) are not interconnected to the Distribution System or CAISO Controlled Grid, but are subject to a fully executed Generator Interconnection Agreement (or its equivalent predecessor agreement) or for which an unexecuted Generator Interconnection Agreement (or its equivalent predecessor agreement) has been requested to be filed with FERC.

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**Business Day:** Monday through Friday, excluding Federal and State Holidays.

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**CAISO Controlled Grid:** The system of transmission lines and associated facilities that have been placed under the CAISO's Operational Control.

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**CAISO Tariff:** The California Independent System Operator FERC Electric Tariff.

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**ELECTRIC RULE NO. 21**  
GENERATING FACILITY INTERCONNECTIONS

Sheet 14

## C. DEFINITIONS (Cont'd.)

(N)

**Calendar Day:** Any day, including Saturday, Sunday or a Federal and State Holiday.

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**Certification Test:** A test pursuant to this Rule that verifies conformance of certain equipment with Commission-approved performance standards in order to be classified as Certified Equipment. Certification Tests are performed by Nationally Recognized Test Laboratories (NRTLs).

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**Certification; Certified; Certificate:** The documented results of a successful Certification Testing.

**Certified Equipment:** Equipment that has passed all required Certification Tests.

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**Commercial Operation:** The status of a Generating Facility that has commenced generating electricity, excluding electricity generated during the period which Producer is engaged in on-site test operations and commissioning of the Generating Facility prior to Commercial Operation.

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**Commercial Operation Date:** The date on which a Generator at a Generating Facility commences Commercial Operation, as agreed to by the Parties.

**Commission:** The Public Utilities Commission of the State of California.

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**Commissioning Test:** A test performed during the commissioning of all or part of a Generating Facility to achieve one or more of the following:

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Verify specific aspects of its performance;

Calibrate its instrumentation;

Establish instrument or Protective Function set-points.

Confidential Information: See Section D.7.

**Conservation Voltage Regulation (CVR):** The CVR program that the Commission directed Distribution Provider to implement as applicable to the operation and design of distribution circuits and related service voltages.

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**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 15

**C. DEFINITIONS (Cont'd.)**

(N)

**Construction Activities:** Actions by Distribution Provider that result in irrevocable financial commitments for the purchase of major electrical equipment or land for Distribution Provider's Interconnection Facilities, Distribution Upgrades, or Network Upgrades assigned to the Interconnection Customer that occur after receipt of all appropriate governmental approvals needed for Distribution Provider's Interconnection Facilities, Distribution Upgrades, or Network Upgrades.

**Control Area:** As defined in the CAISO Tariff.

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**Customer:** The entity that receives or is entitled to receive Distribution Service through Distribution Provider's Distribution System or is a retail Customer of Distribution Provider connected to the Transmission System.

**Dedicated Transformer; Dedicated Distribution Transformer:** A transformer that provides electricity service to a single Customer. The Customer may or may not have a Generating Facility.

**Delivery Network Upgrades:** The transmission facilities at or beyond the point where Distribution Provider's Distribution System interconnects to the CAISO Controlled Grid, other than Reliability Network Upgrades, as defined in the CAISO Tariff.

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**Detailed Study:** An Independent Study, a Distribution Group Study or a Transmission Cluster Study.

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**Detailed Study Agreement:** The agreement entered into by the Interconnection Customer and Distribution Provider which sets forth the Parties' agreement to perform Interconnection Studies under the Independent Study Process or the Distribution Group Study Process.

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**Device:** A mechanism or piece of equipment designed to serve a purpose or perform a function. The term may be used interchangeably with the terms "equipment" and function without intentional difference in meaning. See also Function and Protective Function.

**DGS Phase I Interconnection Study:** Distribution Group Study (DGS) Phase I Interconnection Study performed by the Distribution Provider under the Distribution Group Study Process per Section G.3.c.i.

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**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 16

C. DEFINITIONS (Cont'd.)

(N)

**DGS Phase II Interconnection Study:** Distribution Group Study (DGS) Phase II Interconnection Study performed by the Distribution provider under the Distribution Group Study Process per Section G.3.c.ii.

**Dispute Resolution:** See Section K.

**Distribution Group Study:** An interconnection engineering study as defined in Section F.3.b of a group comprised of Interconnection Requests that fail Screen R that will be studied pursuant to Section F.3.b because the Screen R results demonstrate they are electrically interdependent.

**Distribution Group Study Process:** The interconnection study process set forth in Section F.3.b.

**Distribution Provider:** Pacific Gas and Electric Company

**Distribution Service:** The service of delivering energy over the Distribution System pursuant to the approved tariffs of Distribution Provider other than services directly related to the Interconnection of a Generating Facility under this Rule.

**Distribution Study Group:** A group comprised of Interconnection Requests that fail Screen R that will be studied pursuant to Section F.3.b because the Screen R results demonstrate they are electrically interdependent.

**Distribution System:** All electrical wires, equipment, and other facilities owned or provided by Distribution Provider, other than Interconnection Facilities or the Transmission System, by which Distribution Provider provides Distribution Service to its Customers.

**Distribution Upgrades:** The additions, modifications, and upgrades to Distribution Provider's Distribution System at or beyond the Point of Interconnection to facilitate interconnection of the Generating Facility and render the Distribution Service. Distribution Upgrades do not include Interconnection Facilities.

**Electrical Independence Test:** The tests set forth in Section G.3 used to determine eligibility for the Independent Study Process.

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**ELECTRIC RULE NO. 21**  
GENERATING FACILITY INTERCONNECTIONS

Sheet 17

C. DEFINITIONS (Cont'd.)

(N)

**Emergency:** Whenever in Distribution Provider's discretion an Unsafe Operating Condition or other hazardous condition exists or whenever access is necessary for emergency service restoration, and such immediate action is necessary to protect persons, Distribution Provider's facilities or property of others from damage or interference caused by Interconnection Customer's Generating Facility, or the failure of protective device to operate properly, or a malfunction of any electrical system equipment or a component part thereof.

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**Energy-Only Deliverability Status:** A condition elected by an Interconnection Customer for a Generating Facility interconnected to Distribution System, the result of which is that the Interconnection Customer is responsible only for the costs of Reliability Network Upgrades and is not responsible for the costs of Delivery Network Upgrades, but the Generating Facility will be deemed to have a Net Qualifying Capacity as defined in the CAISO Tariff of zero.

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**Engineering and Procurement Agreement:** An agreement that authorizes Distribution Provider to begin engineering and procurement of long lead-time items necessary for the establishment of the Interconnection in order to advance the implementation of the Interconnection Request.

**Exporting Generating Facility:** Any Generating Facility other than a Non-Export Generating Facility, NEM Generating Facility, or uncompensated Generating Facility.

**Fast Track Process:** The interconnection study process set forth in Section F.2.

**Federal Energy Regulatory Commission:** Referred to herein as FERC.

**Field Testing:** Testing performed in the field to determine whether equipment meets Distribution Provider's requirements for safe and reliable Interconnection.

**Function:** Some combination of hardware and software designed to provide specific features or capabilities. Its use, as in Protective Function, is intended to encompass a range of implementations from a single-purpose device to a section of software and specific pieces of hardware within a larger piece of equipment to a collection of devices and software.

**Generating Facility:** All Generators, electrical wires, equipment, and other facilities, excluding Interconnection Facilities, owned or provided by Producer for the purpose of producing electric power, including storage.

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30194-E

**ELECTRIC RULE NO. 21**  
GENERATING FACILITY INTERCONNECTIONS

Sheet 18

## C. DEFINITIONS (Cont'd.)

(N)

**Generating Facility Capacity:** The net capacity of the Generating Facility and the aggregate net capacity of the Generating Facility where it includes multiple Generators.

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**Generator:** A device converting mechanical, chemical, or solar energy into electrical energy, including all of its protective and control functions and structural appurtenances. One or more Generators comprise a Generating Facility.

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**Generator Interconnection Agreement:** An agreement between Distribution Provider and Producer providing for the Interconnection of a Generating Facility that gives certain rights and obligations to effect or end Interconnection. For the purpose of this Rule, Net Energy Metering or power purchase agreements authorized by the Commission are also defined as Generator Interconnection Agreements.

**Good Utility Practice:** Any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region.

**Governmental Authority:** Any federal, state, local or other governmental regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, or other governmental authority having jurisdiction over the Parties, their respective facilities, or the respective services they provide, and exercising or entitled to exercise any administrative, executive, police, or taxing authority or power; provided, however, that such term does not include Interconnection Customer, Distribution Provider, or any Affiliate thereof.

**Gross Rating; Gross Nameplate Rating; Gross Capacity or Gross Nameplate Capacity:** The total gross generating capacity of a Generator or Generating Facility as designated by the manufacturer(s) of the Generator(s).

**Host Load:** The electrical power, less the Generator auxiliary load, consumed by the Customer, to which the Generating Facility is connected.

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**ELECTRIC RULE NO. 21**  
GENERATING FACILITY INTERCONNECTIONS

Sheet 19

## C. DEFINITIONS (Cont'd.)

(N)

**Independent Study Process:** The interconnection study process set forth in Section F.3.d.

**Independent Study Process Study Agreement:** The agreement entered into by the Interconnection Customer and Distribution Provider which sets forth the Parties' agreement to perform Interconnection Studies under the Independent Study Process.

**Initial Review:** See Section F.2.a.

**In-rush Current:** The current determined by the In-rush Current Test.

**In-Service Date:** The estimated date upon which Applicant reasonably expects it will be ready to begin use of Distribution Provider's Interconnection Facilities.

**Interconnection; Interconnected:** The physical connection of a Generating Facility in accordance with the requirements of this Rule so that Parallel Operation with Distribution Provider's Distribution or Transmission System can occur (has occurred).

**Interconnection Agreement:** See Generator Interconnection Agreement.

**Interconnection Customer:** See Applicant.

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**Interconnection Facilities:** The electrical wires, switches and related equipment that are required in addition to the facilities required to provide electric Distribution Service to a Customer to allow Interconnection. Interconnection Facilities may be located on either side of the Point of Common Coupling as appropriate to their purpose and design. Interconnection Facilities may be integral to a Generating Facility or provided separately. Interconnection Facilities may be owned by either Producer or Distribution Provider.

**Interconnection Facilities Study:** A study conducted by Distribution Provider for an Interconnection Customer under the Independent Study Process to determine a list of facilities (including Distribution Provider's Interconnection Facilities, Distribution Upgrades, and Network Upgrades as identified in the Interconnection System Impact Study), the cost of those facilities, and the time required to interconnect the Generating Facility with Distribution Provider's Distribution or Transmission System. The scope of the study is defined in Section G.3.c.

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**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 20

**C. DEFINITIONS (Cont'd.)**

(N)

**Interconnection Financial Security:** Any of the financial instruments listed in Section F.4.a.

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**Interconnection Request:** An Applicant's request to interconnect a new Generating Facility, or to increase the capacity of, or make a Material Modification to the operating characteristics of, an existing Generating Facility that is interconnected with Distribution Provider's Distribution or Transmission System.

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**Interconnection Study:** A study to establish the requirements for Interconnection of a Generating Facility with Distribution Provider's Distribution System or Transmission System, pursuant to this Rule.

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**Interconnection System Impact Study:** An engineering study conducted by Distribution Provider for an Interconnection Customer under the Independent Study Process that evaluates the impact of the proposed interconnection on the safety and reliability of Distribution Provider's Distribution and/or Transmission System and, if applicable, an Affected System. The scope of the study is defined in Section G.3.c.i.

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**Island; Islanding:** A condition on Distribution Provider's Distribution System in which one or more Generating Facilities deliver power to Customers using a portion of Distribution Provider's Distribution System that is electrically isolated from the remainder of Distribution Provider's Distribution System.

**Large Generating Facility:** A Generating Facility having a Generating Facility Capacity of more than 20 MW.

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**Line Section:** That portion of Distribution Provider's Distribution or Transmission System connected to a Customer bounded by automatic sectionalizing devices or the end of the distribution line.

**Local Furnishing Bond:** Tax-exempt bonds utilized to finance facilities for the local furnishing of electric energy, as described in Internal Revenue Code, 26 U.S.C. § 142(f).

**Local Furnishing Distribution Provider:** Any Distribution Provider that owns facilities financed by Local Furnishing Bonds.

**Material Modification:** Those modifications that have a material impact on cost or timing of any Interconnection Request with the same or a later queue priority date or a change in Point of Interconnection. A Material Modification does not include a change in ownership of a Generating Facility.

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**ELECTRIC RULE NO. 21**  
GENERATING FACILITY INTERCONNECTIONS

Sheet 21

## C. DEFINITIONS (Cont'd.)

(N)

**Metering:** The measurement of electrical power in kilowatts (kW) and/or energy in kilowatt-hours (kWh), and if necessary, reactive power in kVAR at a point, and its display to Distribution Provider, as required by this Rule.

**Metering Equipment:** All equipment, hardware, software including meter cabinets, conduit, etc., that are necessary for Metering.

**Momentary Parallel Operation:** The Interconnection of a Generating Facility to the Distribution and Transmission System for one second (60 cycles) or less.

**Nationally Recognized Testing Laboratory (NRTL):** A laboratory accredited to perform the Certification Testing requirements under this Rule.

**Net Energy Metering (NEM):** Metering for the receipt and delivery of electricity between Producer and Distribution Provider pursuant to California Public Utilities Code (PUC) sections 2827, 2827.8, or 2827.10.

**Net Generation Output Metering:** Metering of the net electrical power output in kW or energy in kWh, from a given Generating Facility. This may also be the measurement of the difference between the total electrical energy produced by a Generator and the electrical energy consumed by the auxiliary equipment necessary to operate the Generator. For a Generator with no Host Load and/or Section 218 Load, Metering that is located at the Point of Common Coupling. For a Generator with Host Load and/or Section 218 Load, Metering that is located at the Generator but after the point of auxiliary load(s) and prior to serving Host Load and/or Section 218 Load.

**Net Rating or Net Nameplate Rating:** The Gross Rating minus the consumption of electrical power of the auxiliary load.

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**Network Upgrades:** Delivery Network Upgrades and Reliability Network Upgrades.

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**Networked Secondary System:** An AC distribution system where the secondaries of the distribution transformers are connected to a common bus for supplying electricity directly to consumers. There are two types of secondary networks: grid networks (also referred to as area networks or street networks) and Spot Networks. Synonyms: Secondary Network. Refer to IEEE 1547.6 for additional detail.

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**ELECTRIC RULE NO. 21**  
GENERATING FACILITY INTERCONNECTIONS

Sheet 22

C. DEFINITIONS (Cont'd.)

(N)

**Non-Emergency:** Conditions or situations that are not Emergencies, including but not limited to meter reading, inspection, testing, routine repairs, replacement, and maintenance.

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**Non-Export; Non-Exporting:** When the Generating Facility is sized and designed such that the Generator output is used for Host Load only and is designed to prevent the transfer of electrical energy from the Generating Facility to Distribution Provider's Distribution or Transmission System as described in Appendix One.

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**Non-Islanding:** Designed to detect and disconnect from a stable Unintended Island with matched load and generation. Reliance solely on under/over voltage and frequency trip is not considered sufficient to qualify as Non-Islanding.

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**Parallel Operation:** The simultaneous operation of a Generator with power delivered or received by Distribution Provider while Interconnected. For the purpose of this Rule, Parallel Operation includes only those Generating Facilities that are Interconnected with Distribution Provider's Distribution or Transmission System for more than 60 cycles (one second).

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**Paralleling Device:** An electrical device, typically a circuit breaker, operating under the control of a synchronization relay or by a qualified operator to connect an energized generator to an energized electric power system or two energized power systems to each other.

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**Party, Parties:** Applicant or Distribution Provider.

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**Periodic Test:** A test performed on part or all of a Generating Facility/Interconnection Facilities at pre-determined time or operational intervals to achieve one or more of the following: 1) verify specific aspects of its performance; 2) calibrate instrumentation; and 3) verify and re-establish instrument or Protective Function set-points.

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**Point of Common Coupling (PCC):** The transfer point for electricity between the electrical conductors of Distribution Provider and the electrical conductors of Producer.

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**Point of Interconnection:** The point where the Interconnection Facilities connect with Distribution Provider's Distribution or Transmission System. This may or may not be coincident with the Point of Common Coupling.

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**ELECTRIC RULE NO. 21**  
GENERATING FACILITY INTERCONNECTIONS

Sheet 23

## C. DEFINITIONS (Cont'd.)

(N)

**Pre-Construction Activities:** The actions by Distribution Provider, other than those required by an Engineering and Procurement Agreement under Section F.3.f, undertaken prior to Construction Activities in order to prepare for the construction of Distribution Provider's Interconnection Facilities, Distribution Upgrades, or Network Upgrades assigned to the Interconnection Customer, including, but not limited to, preliminary engineering, permitting activities, environmental analysis, or other activities specifically needed to obtain governmental approvals for Distribution Provider's Interconnection Facilities, Distribution Upgrades, or Network Upgrades.

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**Producer:** The entity that executes a Generator Interconnection Agreement with Distribution Provider. Producer may or may not own or operate the Generating Facility, but is responsible for the rights and obligations related to the Generator Interconnection Agreement.

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**Production Test:** A test performed on each device coming off the production line to verify certain aspects of its performance.

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**Protective Function(s):** The equipment, hardware and/or software in a Generating Facility (whether discrete or integrated with other functions) whose purpose is to protect against Unsafe Operating Conditions.

**Prudent Electrical Practices:** Those practices, methods, and equipment, as changed from time to time, that are commonly used in prudent electrical engineering and operations to design and operate electric equipment lawfully and with safety, dependability, efficiency, and economy.

**Queue Position:** See Section E.5.C.

**Queued Capacity:** Aggregate queued generation capacity (in MW) for a substation/area bus, bank or circuit (i.e., amount of generation in the queue).

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**Reasonable Efforts:** With respect to an action required to be attempted or taken by a Party under this Rule, efforts that are timely and consistent with Good Utility Practice and are otherwise substantially equivalent to those a Party would use to protect its own interests.

**Reliability Network Upgrades:** The transmission facilities at or beyond the point where Distribution Provider's Distribution System interconnects to the CAISO Controlled Grid, necessary to interconnect one or more Generating Facility(ies) safely and reliably to the CAISO Controlled Grid, as defined in the CAISO Tariff.

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**ELECTRIC RULE NO. 21**  
GENERATING FACILITY INTERCONNECTIONS

Sheet 24

## C. DEFINITIONS (Cont'd.)

(N)

**Section 218 Load:** Electrical power that is supplied in compliance with California PUC section 218. PUC section 218 defines an "Electric Corporation" and provides conditions under which a transaction involving a Generating Facility would not classify a Producer as an Electric Corporation. These conditions relate to "over-the-fence" sale of electricity from a Generating Facility without using Distribution Provider's Distribution or Transmission System.

**Short Circuit Contribution Ratio (SCCR):** The ratio of the Generating Facility's short circuit contribution to the short circuit contribution provided through Distribution Provider's Distribution System for a three-phase fault at the high voltage side of the distribution transformer connecting the Generating Facility to Distribution Provider's Distribution System.

**Single Line Diagram; Single Line Drawing:** A schematic drawing, showing the major electric switchgear, Protective Function devices (including relays, current transformer and potential transformer configurations/wiring in addition to circuit breakers/fuses), wires, Generators, transformers, meters and other devices, providing relevant details to communicate to a qualified engineer the essential design and safety of the system being considered.

**Site Exclusivity:** Documentation reasonably demonstrating: (1) For private land: (a) Ownership of, a leasehold interest in, or a right to develop property upon which the Generating Facility will be located consisting of a minimum of 50% of the acreage reasonably necessary to accommodate the Generating Facility; or (b) an option to purchase or acquire a leasehold interest in property upon which the Generating Facility will be located consisting of a minimum of 50% of the acreage reasonably necessary to accommodate the Generating Facility. (2) For public land, including that controlled or managed by any federal, state or local agency, a final, non-appealable permit, license, or other right to use the property for the purpose of generating electric power and in acreage reasonably necessary to accommodate the Generating Facility, which exclusive right to use public land under the management of the federal Bureau of Land Management shall be in a form specified by the Bureau of Land Management. The demonstration of Site Exclusivity, at a minimum, must be through the Commercial Operation Date of the new Generating Facility or increase in capacity of the existing Generating Facility.

**Small Generating Facility:** A Generating Facility that has a Generating Facility Capacity of no more than 20 MW.

**Special Facilities:** As defined in Distribution Provider's Rule 2.

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Cancelling Revised Cal. P.U.C. Sheet No. 31889-E  
Revised Cal. P.U.C. Sheet No. 30201-E

**ELECTRIC RULE NO. 21**  
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Sheet 25

C. DEFINITIONS (Cont'd.)

(N)

**Spot Network:** For purposes of this Rule, a Spot Network is a type of distribution system found within modern commercial buildings to provide high reliability of service to a single customer.

**Starting Voltage Drop:** The percentage voltage drop at a specified point resulting from In-rush Current. The Starting Voltage Drop can also be expressed in volts on a particular base voltage, (e.g. 6 volts on a 120-volt base, yielding a 5% drop).

**Supplemental Review:** See Section F.2.c.

**System Integrity:** The condition under which Distribution Provider's Distribution and Transmission System is deemed safe and can reliably perform its intended functions in accordance with the safety and reliability rules of Distribution Provider.

**Telemetry:** The electrical or electronic transmittal of Metering data on a real-time basis to Distribution Provider.

**Total Capacity:** Capacity (in MW) of substation/area bus, bank or circuit based on normal or operating ratings.

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**Transfer Trip:** A Protective Function that trips a Generating Facility remotely by means of an automated communications link controlled by Distribution Provider.

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**Transient/Dynamic Stability:** The ability of an electrical system to withstand disturbances. Transient/Dynamic Stability studies are performed to ensure power system stability and are time-based simulations that assess the performance of the power system during and shortly following system disturbances.

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**Transmission Cluster Study Process:** The cluster study process as defined in Distribution Provider's Wholesale Distribution Tariff.

**Transmission System:** Transmission facilities owned by Distribution Provider that have been placed under the CAISO's operational control and are part of the CAISO Controlled Grid, as defined in the CAISO Tariff.

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**Type Test:** A test performed on a sample of a particular model of a device to verify specific aspects of its design, construction and performance.

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30202-E

**ELECTRIC RULE NO. 21**  
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Sheet 26

## C. DEFINITIONS (Cont'd.)

(N)

**Unintended Island:** The creation of an Island, usually following a loss of a portion of Distribution Provider's Distribution System, without the approval of Distribution Provider.

**Unsafe Operating Conditions:** Conditions that, if left uncorrected, could result in harm to personnel, damage to equipment, loss of System Integrity or operation outside pre-established parameters required by the Generator Interconnection Agreement.

**Wholesale Distribution Tariff:** PG&E's Wholesale Distribution Tariff (WDT)

## D. GENERAL, RULES, RIGHTS AND OBLIGATIONS

## 1. AUTHORIZATION REQUIRED TO OPERATE

A Producer must comply with this Rule, execute a Generator Interconnection Agreement with Distribution Provider, and receive Distribution Provider's express written permission before Parallel Operation of its Generating Facility with Distribution Provider's Distribution or Transmission System. Distribution Provider shall apply this Rule in a non-discriminatory manner and shall not unreasonably withhold its permission for Parallel Operation of Producer's Generating Facility with Distribution Provider's Distribution or Transmission System.

## 2. SEPARATE AGREEMENTS REQUIRED FOR OTHER SERVICES

A Producer requiring other electric services from Distribution Provider including, but not limited to, Distribution Service during periods of curtailment or interruption of Producer's Generating Facility, must enter into agreements with Distribution Provider for such services in accordance with Distribution Provider's Commission-approved tariffs.

## 3. SERVICES UNDER THIS TARIFF LIMITED TO INTERCONNECTION

Interconnection with Distribution Provider's Distribution or Transmission System under this Rule does not provide a Producer any rights to utilize Distribution Provider's Distribution or Transmission System for the transmission, distribution, or wheeling of electric power, nor does it limit those rights.

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**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 27

**D. GENERAL, RULES, RIGHTS AND OBLIGATIONS (Cont'd.)**

(N)

**4. COMPLIANCE WITH LAWS, RULES, AND TARIFFS**

A Producer shall ascertain and comply with applicable Commission-approved tariffs of Distribution Provider; applicable FERC-approved rules, tariffs, and regulations; and any local, state or federal law, statute or regulation which applies to the design, siting, construction, installation, operation, or any other aspect of Producer's Generating Facility and Interconnection Facilities.

**5. DESIGN REVIEWS AND INSPECTIONS**

Distribution Provider shall have the right to review the design of a Producer's Generating and Interconnection Facilities and to inspect a Producer's Generating and/or Interconnection Facilities prior to the commencement of Parallel Operation with Distribution Provider's Distribution or Transmission System. Distribution Provider may require a Producer to make modifications as necessary to comply with the requirements of this Rule. Distribution Provider's review and authorization for Parallel Operation shall not be construed as confirming or endorsing Producer's design or as warranting the Generating Facilities' and/or Interconnection Facilities' safety, durability or reliability. Distribution Provider shall not, by reason of such review or lack of review, be responsible for the strength, adequacy, or capacity of such equipment.

**6. RIGHT TO ACCESS**

A Producer's Generating Facility and/or Interconnection Facilities shall be reasonably accessible to Distribution Provider personnel as necessary for Distribution Provider to perform its duties and exercise its rights under its tariffs approved by the Commission, and under any Generator Interconnection Agreement between Distribution Provider and Producer.

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**D. GENERAL, RULES, RIGHTS AND OBLIGATIONS (Cont'd.)**

(N)

**7. CONFIDENTIALITY**

**a. Scope**

Confidential Information shall include, without limitation, confidential, proprietary or trade secret information relating to the present or planned business of Applicant, Customer, Producer, or Distribution Provider (individually referred to in Section D.7 as Party or collectively as Parties), including all information relating to a Party's technology, research and development, business affairs, and pricing. Distribution Provider shall not use the information contained in the Interconnection Request to propose discounted tariffs to the Customer unless authorized to do so by the Customer or the information is provided to Distribution Provider by the Customer through other means.

Information is Confidential Information only if it is clearly designated or marked in writing as confidential on the face of the document (including electronic materials), or, if the information is conveyed orally or by inspection, if the Party providing the information orally informs the Party receiving the information that the information is confidential. For purposes of this Rule all design, operating specifications, and metering data provided by Applicant shall be deemed Confidential Information regardless of whether it is clearly marked or otherwise designated as such, except as provided in section D.7.b. below.

If requested by either Party, the other Party shall provide in writing, the basis for asserting that the information referred to in this Article warrants confidential treatment, and the requesting Party may disclose such writing to the appropriate Governmental Authority. Each Party shall be responsible for the costs associated with affording confidential treatment to its information.

**b. Limitations on Scope**

Confidential Information shall not include information pertaining to each Interconnection Request that may be provided in a publicly-posted queue pursuant to Section E.5.d of this Rule.

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## D. GENERAL, RULES, RIGHTS AND OBLIGATIONS (Cont'd.)

(N)

## 7. CONFIDENTIALITY (Cont'd.)

## b. Limitations on Scope (Cont'd.)

Confidential Information shall not include information that: (1) is generally available to the public other than as a result of a disclosure by the receiving Party; (2) was in the lawful possession of the receiving Party on a non-confidential basis before receiving it from the disclosing Party; (3) was supplied to the receiving Party without restriction by a third party, who, to the knowledge of the receiving Party after due inquiry, was under no obligation to the disclosing Party to keep such information confidential; (4) was independently developed by the receiving Party without reference to Confidential Information of the disclosing Party; (5) is, or becomes, publicly known, through no wrongful act or omission of the receiving Party; or (6) is required, in accordance with Section D.7.d, Required Disclosure, to be disclosed by any Governmental Authority or is otherwise required to be disclosed by law or subpoena.

Information designated as Confidential Information will no longer be deemed confidential if the Party that designated the information as confidential notifies the other Party that it no longer is confidential.

## c. Disclosure to Commission, FERC, or their respective Staff

Notwithstanding anything in this Section D.7 to the contrary, and pursuant to 18 CFR section 1b.20 in the case of disclosure to FERC, if the Commission, FERC, or their respective staff, during the course of an investigation or otherwise, requests information from one of the Parties that is otherwise required to be maintained in confidence pursuant to this Rule, the Party shall provide the requested information to the Commission, FERC, or their respective staff, within the time provided for in the request for information. In providing the information to the Commission, FERC, or their respective staff, the Party shall, pursuant to PUC section 583 and General Order 66-C in the case of disclosure to the Commission, and consistent with 18 CFR section 388.112 in the case of disclosure to FERC, request that the information be treated as confidential and non-public by the Commission, FERC, and their respective staff and that the information be withheld from public disclosure. Requests from another state regulatory body with jurisdiction conducting a confidential investigation shall be treated in a similar manner, consistent with applicable state rules and regulations.

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**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 30

**D. GENERAL, RULES, RIGHTS AND OBLIGATIONS (Cont'd.)**

(N)

**7. CONFIDENTIALITY (Cont'd.)**

**d. Required Disclosure**

Subject to the exception in Section D.7.c, any information that a Party claims is Confidential Information shall not be disclosed by the other Party to any person not employed or retained by the other Party, except to the extent disclosure is (i) required by law or pursuant to an order of the Commission or FERC; (ii) reasonably deemed by the disclosing Party to be required to be disclosed in connection with a dispute between or among the Parties, or the defense of litigation or dispute; (iii) otherwise permitted by consent of the other Party, such consent not to be unreasonably withheld; (iv) necessary to fulfill its obligations under this Rule; or (v) as a transmission or distribution service provider or a Control Area operator, including disclosing the Confidential Information to a Regional Transmission Organization or CAISO, or to a sub-regional, regional or national reliability organization or planning group under the applicable confidentiality provisions in the relevant tariffs. Prior to any disclosures of the other Party's Confidential Information under this subparagraph, or if any third party or Governmental Authority makes any request or demand for any of the information described in this subparagraph, the disclosing Party agrees to assert confidentiality and cooperate with the other Party in seeking to protect the Confidential Information from public disclosure by confidentiality agreement, protective order or other reasonable measures.

**8. PRUDENT OPERATION AND MAINTENANCE REQUIRED**

A Producer shall operate and maintain its Generating Facility and Interconnection Facilities in accordance with Prudent Electrical Practices and shall maintain compliance with this Rule.

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**D. GENERAL, RULES, RIGHTS AND OBLIGATIONS (Cont'd.)**

(N)

**9. CURTAILMENT AND DISCONNECTION**

Distribution Provider may limit the operation or disconnect or require the disconnection of a Producer's Generating Facility from Distribution Provider's Distribution or Transmission System at any time, with or without notice, in the event of an Emergency, or to correct Unsafe Operating Conditions. Distribution Provider may also limit the operation or disconnect or require the disconnection of a Producer's Generating Facility from Distribution Provider's Distribution or Transmission System upon the provision of reasonable written notice: 1) to allow for routine maintenance, repairs or modifications to Distribution Provider's Distribution or Transmission System; 2) upon Distribution Provider's determination that a Producer's Generating Facility is not in compliance with this Rule; or 3) upon termination of the Generator Interconnection Agreement. Upon Producer's written request, Distribution Provider shall provide a written explanation of the reason for such curtailment or disconnection.

**10. LOCAL FURNISHING BONDS**

If a proposed Interconnection of a Generating Facility would impair the tax-exempt status of interest on the Local Furnishing Bonds or the deductibility of interest expense on the Local Furnishing Bonds to the Local Furnishing Distribution Provider under the Internal Revenue Code, Treasury Regulations and/or applicable IRS rulings, the Interconnection Customer will be required to pay the costs properly attributable to the proposed Interconnection of such Generating Facility. The Interconnection Study shall specify and estimate the cost of all remedial measures that address the financial impacts, if any, on Local Furnishing Bonds that would result from an Interconnection.

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**D. GENERAL, RULES, RIGHTS AND OBLIGATIONS (Cont'd.)**

(N)

**11. COORDINATION WITH AFFECTED SYSTEMS**

Distribution Provider will notify the Affected System Operators that are potentially affected by an Applicant's Interconnection Request or group of Interconnection Requests. Distribution Provider will coordinate the conduct of any studies required to determine the impact of the Interconnection Request on Affected Systems with Affected System Operators and, if possible, include those results (if available) in its applicable Interconnection Study within the time frame specified in this Rule. Distribution Provider will include such Affected System Operators in all meetings held with Applicant as required by this Rule. Applicant will cooperate with Distribution Provider in all matters related to the conduct of studies and the determination of modifications to Affected Systems. A transmission provider which may be an Affected System shall cooperate with Distribution Provider with whom interconnection has been requested in all matters related to the conduct of studies and the determination of modifications to Affected Systems. Applicant shall enter into an agreement with the owner of the Affected System, as applicable. The agreement shall specify the terms governing payments to be made by Applicant to the owner of the Affected System as well as the repayment, if applicable, by the owner of the Affected System.

**12. TRANSFERABILITY OF INTERCONNECTION REQUEST**

An Applicant may transfer its Interconnection Request to another entity only if such entity acquires the proposed Generating Facility identified in the Interconnection Request and the Point of Interconnection does not change.

**13. SPECIAL PROVISIONS APPLICABLE TO NET ENERGY METERED APPLICANTS**

Notwithstanding any other provision in this Rule:

- a. ~~4.~~ For Generating Facilities qualifying for service under PUC Sections 2827, 2827.8 and 2827.10 Distribution Provider may proceed from Initial to Supplemental Review to Independent Study Process or Distribution Group Study Process to further study without waiting for Applicant concurrence, since Applicant is not responsible for payment of study costs.

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**ELECTRIC RULE NO. 21**  
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**D. GENERAL, RULES, RIGHTS AND OBLIGATIONS (Cont'd.)**

(N)

**13. SPECIAL PROVISIONS APPLICABLE TO NET ENERGY METERED APPLICANTS (Cont'd.)**

b. For Generating Facilities qualifying for service under PUC ~~s~~Sections 2827 and 2827.8 Distribution Provider approval for Interconnection shall normally be processed not later than thirty (30) Business Days following Distribution Provider's receipt of 1) a completed Net Energy Metering Interconnection Request including all supporting documents and required payments; 2) a completed signed Net Energy Metering Generator Interconnection Agreement; and 3) evidence of Applicant's final electric inspection clearance from the Governmental Authority having jurisdiction over the Generating Facility. If the 30-day period cannot be met, Distribution Provider shall notify Applicant and the Commission of the reason for the inability to process the Interconnection Request and the expected completion date. However, Applicants with PUC ~~s~~Section 2827 Generating Facilities that include non-inverter based Generators and/or Generators with non-Certified Equipment should plan to submit a completed Net Energy Metering Interconnection Request including all supporting documents sufficient for Distribution Provider to start the review process in Section F.2.a without waiting for the final inspection clearance. Applicants with such Generating Facilities are advised to submit their Interconnection Request at least six (6) months in advance of their planned Commercial Operation Date. Depending on the size and location of these Generating Facilities, additional time for review may be required and could include Supplemental Review (twenty (20) Business Days), a System Impact Study (sixty (60) Calendar Days), and a Facilities Study (sixty (60) to ninety (90) Calendar Days depending on whether upgrades to the electric system are identified) as set out in Section F. The advance submission of the Interconnection Request will better accommodate Distribution Provider's review and studies in a manner consistent with the timelines established in this Rule that may be required to complete the processing for interconnection of non-inverter based Generators and/or Generators with non-Certified Equipment.

c. Unless Net Generator Output Metering is required, Metering Equipment necessary to obtain service under PUC ~~s~~Sections 2827 and 2827.8 shall be installed and operational within the timeframe required to complete Interconnection.

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**D. GENERAL, RULES, RIGHTS AND OBLIGATIONS (Cont'd.)**

(N)

**SPECIAL PROVISIONS APPLICABLE TO NET ENERGY METERED APPLICANTS (Cont'd.)**

d. 4. An Applicant with a Fast Track Interconnection Request for a Net Energy Metering or Non-Export Generating Facility that 1) goes for more than one year from the date of Distribution Provider's written notification that the Interconnection Request is valid without a signed Generator Interconnection Agreement, or 2) has a Generating Facility that has not been approved for Parallel Operation within one year of completion of all applicable review and/or studies, is subject to withdrawal by Distribution Provider; however, Distribution Provider may not deem the Interconnection Request to be withdrawn if the i) Applicant provides reasonable evidence that the Interconnection Request is still active or ii) if the delay is at no fault of Applicant.

**14. COMPLIANCE WITH ESTABLISHED TIMELINES**

Distribution Provider shall use Reasonable Efforts in meeting all the timelines provided for under this Rule. In the event Distribution Provider is not able to meet a particular timeline set forth in this Rule, Distribution Provider shall notify Applicant as soon as practicable and provide an estimated completion date with an explanation of the reasons why additional time is needed. Any Applicant dissatisfied with the Reasonable Efforts of Distribution Provider may use the informal procedures set out in Section F.1.d and/or the Dispute Resolution process in Section K.

**15. MODIFICATION OF TIMELINES**

Distribution Provider and Applicant, for good cause, may agree to modify any of the timelines in this Rule. The modified timeline shall be mutually agreed upon, in writing, between Distribution Provider and Applicant.

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**ELECTRIC RULE NO. 21**  
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Sheet 35

**E. INTERCONNECTION REQUEST SUBMISSION PROCESS**

(N)

**1. OPTIONAL PRE-APPLICATION REPORT**

Upon receipt of a completed Pre-Application Report Request and a non-refundable processing fee of \$300, Distribution Provider shall provide pre-application data described in this section within ten (10) Business Days of receipt. The Pre-Application Report Request shall include a proposed Point of Interconnection, generation technology and fuel source. The proposed Point of Interconnection shall be defined by latitude and longitude, site map, street address, utility equipment number (e.g. pole number), meter number, account number or some combination of the above sufficient to clearly identify the location of the point of interconnection.

The Pre-Application Report will include the following information if available:

- a. Total Capacity (MW) of substation/area bus or bank and circuit likely to serve proposed site.
- b. Allocated Capacity (MW) of substation/area bus or bank and circuit likely to serve proposed site.
- c. Queued Capacity (MW) of substation/area bus or bank and circuit likely to serve proposed site.
- d. Available Capacity (MW) of substation/area bus or bank and circuit most likely to serve proposed site.
- e. Substation nominal distribution voltage or transmission nominal voltage if applicable.
- f. Nominal distribution circuit voltage at the proposed site.
- g. Approximate circuit distance between the proposed site and the substation.
- h. Relevant Line Section(s) peak load estimate, and minimum load data, when available.
- i. Number of protective devices and number of voltage regulating devices between the proposed site and the substation/area.
- j. Whether or not three-phase power is available at the site.

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**GENERATING FACILITY INTERCONNECTIONS**

Sheet 36

**E. INTERCONNECTION REQUEST SUBMISSION PROCESS (Cont'd.) (N)**

**1. PRE-APPLICATION REPORT (Cont'd.)**

- k. Limiting conductor rating from proposed Point of Interconnection to distribution substation.
- l. Based on proposed Point of Interconnection, existing or known constraints such as, but not limited to, electrical dependencies at that location, short circuit interrupting capacity issues, power quality or stability issues on the circuit, capacity constraints, or secondary networks.

The Pre-Application Report need only include pre-existing data. A Pre-Application Report request does not obligate Distribution Provider to conduct a study or other analysis of the proposed project in the event that data is not available. If Distribution Provider cannot complete all or some of a Pre-Application Report due to lack of available data, Distribution Provider will provide Applicant with a Pre-Application Report that includes the information that is available.

In requesting a Pre-Application Report, Applicant understands that 1) the existence of "Available Capacity" in no way implies that an interconnection up to this level may be completed without impacts since there are many variables studied as part of the interconnection review process, 2) the distribution system is dynamic and subject to change and 3) data provided in the Pre-Application Report may become outdated and not useful at the time of submission of the complete Interconnection Request. Notwithstanding any of the provisions of this Section, Distribution Provider shall, in good faith, provide Pre-Application Report data that represents the best available information at the time of reporting.

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Sheet 37

**E. INTERCONNECTION REQUEST SUBMISSION PROCESS (Cont'd.)**

(N)

**2. INTERCONNECTION REQUEST PROCESS**

**a. Applicant Initiates Contact with Distribution Provider**

Upon request, Distribution Provider will provide information and documents (such as sample agreements, Interconnection Request, technical information, listing of Certified Equipment, Initial and Supplemental Review fee information, applicable tariff schedules and Metering requirements) to a potential Applicant. Unless otherwise agreed upon, all such information shall normally be sent to an Applicant within three (3) Business Days following the initial request from Applicant. Distribution Provider will establish an individual representative as the single point of contact for Applicant, but may allocate responsibilities among its staff to best coordinate the Interconnection of an Applicant's Generating Facility.

**b. Applicant Selects a Study Process**

An Applicant may select one of two interconnection evaluation processes in accordance with the following eligibility requirements:

**i) Fast Track Eligibility**

Non-Exporting and Net Energy Metered Generating Facilities are eligible for Fast Track evaluation regardless of the Gross Nameplate Rating of the proposed Generating Facility. Exporting Generating Facilities with a Gross Nameplate Rating no larger than 3.0 MW on a 12 kV or higher voltage interconnection point for PG&E are also eligible for Fast Track evaluation.

For an Exporting Generating Facility that agrees to the installation of Distribution Provider-approved protective devices at Applicant's cost such that the Exporting Generating Facility's net export will never exceed the Fast Track eligibility limits, the Generating Facility's net export will be considered for purposes of Fast Track eligibility. However, these Interconnection Requests will be required to complete Supplemental Review and Applicants should pre-pay for Supplemental Review at the time the Interconnection Request is submitted.

(N)

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**E. INTERCONNECTION REQUEST SUBMISSION PROCESS (Cont'd.)** (N)

**2. INTERCONNECTION REQUEST PROCESS (Cont'd.)**

**b. Applicant Selects a Study Process (Cont'd.)**

**ii) Detailed Study Eligibility**

Interconnection Requests that are not eligible for Fast Track evaluation must apply for Detailed Study. An Applicant may also choose to apply directly for Detailed Studies. Detailed Study shall require (i) an Independent Study Process, (ii) a Distribution Group Study Process, or (iii) a Transmission Cluster Study Process. The specific study process used will depend on the results of the Electrical Independence Tests for the Transmission and Distribution Systems.

**iii) Request for Deliverability Assessment**

Unless specified otherwise in the Interconnection Request, Generating Facilities eligible to be studied under the Fast Track Process, Independent Study Process or Distribution Group Study Process will be assumed to have selected Energy-Only Deliverability Status. Nothing herein will prohibit an Applicant from seeking a deliverability assessment in accordance with the WDT. Applicants studied under the Transmission Cluster Study Process may seek a deliverability assessment in accordance with the applicable provisions of the WDT.

**c. Applicant Completes an Interconnection Request**

All Applicants shall submit a complete and valid Interconnection Request. When applicable per Table E.1, a nonrefundable \$800 Interconnection Request fee, and for Applicants that elect Detailed Study in the Interconnection Request, a study deposit shall be required per instructions in the Interconnection Request. Applicants who proceed to Detailed Study after Fast Track will provide a Detailed Study deposit as specified in Section E.3.a.

Applicant shall submit a separate Interconnection Request for each Point of Interconnection. An Interconnection Request for the expansion of capacity of an existing operating Generating Facility shall be treated the same as an Interconnection Request for a new Generating Facility pursuant to this Rule.

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**E. INTERCONNECTION REQUEST SUBMISSION PROCESS (Cont'd.)** (N)

**2. INTERCONNECTION REQUEST PROCESS (Cont'd.)**

**c. Applicant Completes an Interconnection Request (Cont'd.)**

i) Interconnection Requests for the Independent Study Process will be accepted throughout the year, except during the Distribution Group Study windows described below.

ii) Interconnection Requests to be studied under the Distribution Group Study Process shall either be (a) an Independent Study Process Interconnection Request that passed screen Q and failed Screen R for which the Applicant elects to continue to the next available Distribution Group Study, or (b) an Interconnection Request submitted during a Distribution Group Study Application window that passes Screen Q.

There will normally be two (2) Distribution Group Study Application windows annually. The first Distribution Group Study Application window will usually open on March 1 and close on March 31. The second Distribution Group Study Application window will usually open on September 1 and close on September 30. In the event that any date set in this Section is not a Business Day, then the applicable date shall be the next Business Day thereafter.

The Distribution Provider may change the Distribution Group Study Application window interval and opening or closing dates. Any changes will be posted on the Distribution Provider's website. If there is a conflict between the Distribution Group Study Application window interval and opening or closing dates posted on the Distribution Provider's website and the dates identified in the paragraph above, the dates posted on the Distribution Provider's website shall apply.

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**GENERATING FACILITY INTERCONNECTIONS**

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**E. INTERCONNECTION REQUEST SUBMISSION PROCESS (Cont'd.)**

(N)

**2. INTERCONNECTION REQUEST PROCESS (Cont'd.)**

**c. Applicant Completes an Interconnection Request (Cont'd.)**

**TABLE E-1**

**Summary of Interconnection Request Fees, Deposits and Exemptions**

Generating Facility Type	Interconnection Request Fee	Supplemental Review Fee	Detailed Study Deposit	Additional Commissioning Test Verification
Non-Net Energy Metering	\$800	\$2,500	For a Generating Facility with a Gross Nameplate Rating of 5 MW or less and applying to the Independent Study Process, <u>\$10,000 for a System Impact Study or the DGS Phase I Interconnection Study in the case of the Distribution Group Study Process</u> ; <del>\$10,000 for a System Impact Study</del> and \$15,000 for an <u>Interconnection Facilities Study or DGS Phase II Interconnection Study in the case of the Distribution Group Study Process</u> .  For a Generating Facility with a Gross Nameplate Rating above 5 MW, \$50,000 plus \$1,000 per MW of electrical output of the Generating Facility, or the increase in electrical output of the existing Generation Facility, as applicable, rounded up to the nearest whole MW, up to a maximum of \$250,000.	\$150/Person Hour *
Net Energy Metering (per PUC sections 2827, 2827.8, or 2827.10 (per D.02-03-057))	\$0	\$0	\$0	N/A
Solar 1MW or less that does not sell power to Distribution Provider (per D.01-07-027)	First \$5,000 of study fees waived			\$150/Person Hour *

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\*Plus additional costs for travel, lodging and meals.

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**E. INTERCONNECTION REQUEST SUBMISSION PROCESS (Cont'd.)** (N)

**2. INTERCONNECTION REQUEST PROCESS (Cont'd.)**

**d. Site Exclusivity**

Documentation of Site Exclusivity must be submitted with the Interconnection Request. This requirement does not apply to Applicants with NEM or Non-Export Generating Facilities.

**3. INTERCONNECTION REQUEST FEE AND STUDY DEPOSIT**

The Interconnection Request fee shall be waived for Interconnection Requests pursuant to PUC Sections 2827, 2827.8, or 2827.10, per Commission Decision 02-03-057 and for solar-powered Generating Facilities that do not sell power to Distribution Provider per Commission Decision 01-07-027. Generating Facilities eligible for Net Energy Metering under PUC Sections 2827, 2827.8, or 2827.10 are exempt from any costs associated with Interconnection Studies. Interconnection Study fees for solar Generating Facilities up to 1 MW interconnecting to the Distribution System that do not sell power to the grid will be waived up to the amount of \$5,000.

**a. Detailed Study Deposit**

**i) Detailed Study Deposit**

To proceed with Detailed Study, Applicant must submit a Detailed Study deposit.

For a Generating Facility with a Gross Nameplate Rating of 5 MW or less, Applicant must submit a Detailed Study deposit of \$10,000 for the Interconnection System Impact Study or the DGS Phase I Interconnection Study, and where an Interconnection Facilities Study or DGS Phase II Interconnection Study in the case of the Distribution Group Study Process is required, an additional \$15,000 deposit must be submitted as required in Section F.3.b.viii or F.3.d.viii.

For a Generating Facility with a Gross Nameplate Rating above 5 MW, Applicant must submit a Detailed Study deposit equal to \$50,000 plus \$1,000 per MW of electrical output of the Generating Facility, or the increase in electrical output of the existing Generating Facility, as applicable, rounded up to the nearest whole MW, up to a maximum of \$250,000.

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**E. INTERCONNECTION REQUEST SUBMISSION PROCESS (Cont'd.) (N)**

**3. INTERCONNECTION REQUEST FEE AND STUDY DEPOSIT (Cont'd.)**

**a. Detailed Study Deposit (Cont'd.)**

**ii) Use of Detailed Study Deposit**

The Detailed Study deposit shall be applied to pay for prudent costs incurred by Distribution Provider, the CAISO, or third parties at the direction of Distribution Provider or CAISO, as applicable, to perform and administer the Interconnection Studies. Deposit amounts that exceed the prudent costs incurred by Distribution Provider shall be refunded to Applicant within sixty (60) Calendar Days following the issuance of the final study applicable to the Interconnection Request.

The interconnection study costs for a Distribution Study Group shall be allocated equally among the Interconnection Requests within the group.

The Detailed Study deposits shall be refundable as follows:

- (1) Should an Interconnection Request be withdrawn by Applicant or be deemed withdrawn by Distribution Provider by written notice under Section F.6 on or before thirty (30) Calendar Days following the scoping meeting, Distribution Provider shall refund to Applicant any portion of Applicant's Detailed Study deposit that exceeds the costs Distribution Provider, CAISO, and third parties have incurred on Applicant's behalf, including interest from the date of receipt by Distribution Provider to the date of payment to Applicant. The applicable interest shall be one-twelfth of the Federal Reserve three-month Commercial Paper Rate – Non-Financial, from the Federal Reserve Statistical Release H.15 (expressed as an annual rate).

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**E. INTERCONNECTION REQUEST SUBMISSION PROCESS (Cont'd.)** (N)

**3. INTERCONNECTION REQUEST FEE AND STUDY DEPOSIT (Cont'd.)**

**a. Detailed Study Deposit (Cont'd.)**

**ii) Use of Detailed Study Deposit (Cont'd.)**

- (2) Should an Interconnection Request that has moved into the Detailed Study Process be withdrawn by Applicant or be deemed withdrawn by Distribution Provider by written notice under Section F.6 more than thirty (30) Calendar Days after the scoping meeting, but on or before thirty (30) Calendar Days following the results meeting for the Interconnection System Impact Study or DGS Phase I Interconnection Study, Distribution Provider shall refund to Applicant the difference between (i) Applicant's ~~d~~Detailed ~~s~~Study deposit and (ii) the greater of the costs Distribution Provider, CAISO, and third parties have incurred on Applicant's behalf or one-half of the original ~~d~~Detailed ~~s~~Study deposit up to a maximum of \$100,000, including interest from the date of receipt by Distribution Provider to the date of payment to Applicant. The applicable interest shall be one-twelfth of the Federal Reserve three-month Commercial Paper Rate – Non-Financial, from the Federal Reserve Statistical Release H.15 (expressed as an annual rate).
- (3) Should an Interconnection Request be withdrawn by Applicant or be deemed withdrawn by Distribution Provider by written notice under Section F.6 at any time more than thirty (30) Calendar Days after the results meeting for the Interconnection System Impact Study or DGS Phase I Interconnection Study, the ~~d~~Detailed ~~s~~Study deposit shall be non-refundable.

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**E. INTERCONNECTION REQUEST SUBMISSION PROCESS (Cont'd.)** (N)

**3. INTERCONNECTION REQUEST FEE AND STUDY DEPOSIT (Cont'd.)**

**a. Detailed Study Deposit (Cont'd.)**

**ii) Use of Detailed Study Deposit (Cont'd.)**

(4) Upon execution of a Generator Interconnection Agreement by an Applicant and Distribution Provider, Distribution Provider shall refund to Applicant any portion of Applicant's Detailed Study deposit that exceeds the costs Distribution Provider, CAISO, and third parties have incurred on Applicant's behalf, including interest from the date of receipt by Distribution Provider to the date of payment to Applicant. The applicable interest shall be one-twelfth of the Federal Reserve three-month Commercial Paper Rate – Non-Financial, from the Federal Reserve Statistical Release H.15 (expressed as an annual rate).

**iii) Impact of Withdrawal**

Notwithstanding the foregoing, an Applicant that withdraws or is deemed to have withdrawn its Interconnection Request shall be obligated to pay to Distribution Provider all costs in excess of the Detailed Study deposit that have been prudently incurred or irrevocably have been committed to be incurred with respect to that Interconnection Request prior to withdrawal. Distribution Provider will reimburse the CAISO or third parties, as applicable, for all work performed on behalf of the withdrawn Interconnection Request at Distribution Provider's direction. Applicant must pay all monies due before it is allowed to obtain any Interconnection Study data or results. Any proceeds of the Detailed Study deposit not otherwise reimbursed to Applicant or applied to costs incurred or irrevocably committed to be incurred for the interconnection studies shall be applied as directed by the Commission. Where an Applicant with remaining proceeds from a Detailed Study deposit cannot be located, such remaining proceeds shall escheat to the State pursuant to the Unclaimed Property Law commencing with the California Code of Civil Procedure § 1500.

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**E. INTERCONNECTION REQUEST SUBMISSION PROCESS (Cont'd.)** (N)

**3. INTERCONNECTION REQUEST FEE AND STUDY DEPOSIT (Cont'd.)**

**a. Detailed Study Deposit (Cont'd.)**

**iv) Special Circumstances**

Applicant may propose, and Distribution Provider may agree to reduced costs for reviewing atypical Interconnection Requests, such as Interconnection Requests submitted for multiple Generating Facilities, multiple sites, or otherwise as conditions warrant.

**4. INTERCONNECTION COST RESPONSIBILITY**

An Applicant, or a Producer where those are different entities, is responsible for all fees and/or costs, including Commissioning Testing, required to complete the interconnection process. A Producer that interconnects to Distribution Provider's Distribution or Transmission System is responsible for all costs associated with Parallel Operation to support the safe and reliable operation of the Distribution and Transmission System. Generating Facilities eligible for Net Energy Metering under California PUC Sections 2827, 2827.8 or 2827.10 are exempt from any costs associated with Distribution or Network Upgrades.

**a. Costs of Interconnection and Parallel Operation**

The Interconnection and Parallel Operation of a Producer may trigger the need for Interconnection Facilities, Special Facilities or Added Facilities, Upgrades, Delivery Network Upgrades, and/or Reliability Network Upgrades. Interconnection Facilities installed on Producer's side of the PCC may be owned, operated and maintained by Producer or Distribution Provider. Interconnection Facilities installed on Distribution Provider's side of the PCC and Distribution System modifications shall be owned, operated, and maintained only by Distribution Provider.

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**E. INTERCONNECTION REQUEST SUBMISSION PROCESS (Cont'd.)** (N)

**4. INTERCONNECTION COST RESPONSIBILITY (Cont'd.)**

**b. Methodology and Timing of Cost Identification**

Any costs triggered by a Producer are based on Producer's unique Interconnection requirements, Producer's impact on the Distribution System and/or Transmission System following allocation of capacity to earlier-queued interconnection requests, and Producer's electrical interdependence with any earlier-queued interconnection requests. Earlier-queued interconnection requests include interconnection requests under any applicable tariff.

**c. Timing of Cost Identification**

For Applicants to Fast Track, Independent Study Process, or Distribution Group Study Process, costs may be identified during the study process, or after the study process is complete and a Generator Interconnection Agreement is executed. The purpose of later identification of costs is to facilitate Applicant's Interconnection while accommodating incomplete interconnection studies for earlier-queued interconnection requests to the same Line Section, distribution circuit, and/or substation, incomplete interconnection studies for earlier-queued interconnection requests with which Applicant is electrically interdependent with respect to short circuit duty, withdrawal of earlier-queued interconnection requests for Interconnection to the Distribution or Transmission System, and delay or cancellation of planned Distribution System Upgrades.

**d. Producer Costs During Parallel Operation**

All Producers are required to provide and maintain Interconnection Facilities, for the duration of the Generator Interconnection Agreement, that meet Distribution Provider's technical design and operating standards for Parallel Operation as set out in Section H, including any updates to those standards. This includes Producer responsibility for costs associated with changes to the operating characteristics at the Point of Interconnection necessitated by Distribution Provider's upgrades to the Transmission or Distribution System from time to time.

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**E. INTERCONNECTION REQUEST SUBMISSION PROCESS (Cont'd.)** (N)

**4. INTERCONNECTION COST RESPONSIBILITY (Cont'd.)**

**e. Cost Allocation**

Except where exempt by law or Commission decision, costs triggered by an Interconnection Request under the Fast Track ~~Process~~ or the Independent Study Process are the responsibility of the triggering Interconnection Request, or in the case of the Distribution Group Study Process, the responsibility of the triggering Interconnection Request(s). The costs of Distribution Upgrades or Network Upgrades identified through a Distribution Group Study shall be assigned to all Interconnection Requests in a Distribution Study Group pro rata based on each Interconnection Request's contribution to the need for the upgrade.

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**f. Summary Tables**

Table E.2 summarizes cost responsibility for costs and fees that may arise in the course of the interconnection process for NEM and non-NEM Applicants. Table E.3 summarizes cost responsibility for costs and fees that may arise in the course of the interconnection process for NEM Applicants under various sequences of interconnecting NEM and non-NEM Generators on the same PCC interconnecting to the Distribution or Transmission System.

**Table E.2 Summary of Producer Cost Responsibility**

Generating Facility Type	Interconnection Request Fee		Supplemental Review Fee		Detailed Study Cost (Independent Study Process, Distribution Group Study Process, or Transmission Cluster Study Process)		Interconnection Facilities Cost		Distribution Upgrades Cost		Transmission Network Upgrade Cost (CAISO Tariff Section 12.3.2 of Appendix Y)	
	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
Non-NEM	X		X		X		X		X		X	
NEM		X		X		X	X			X		X

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**E. INTERCONNECTION REQUEST SUBMISSION PROCESS (Cont'd.)**

(N)

**4. INTERCONNECTION COST RESPONSIBILITY (Cont'd.)**

**f. Summary Tables (Cont'd.)**

**Table E.3 Summary of Producer Cost Responsibility for Multiple Tariff Interconnections**

Existing Generating Facility	New Generating Facility	Interconnection Request Fee		Supplemental Review Fee		Detailed Study Cost		Interconnection Facilities Cost		Distribution Upgrades Cost	
		YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
NEM	Non-NEM	X		X		X		X		X <sup>a</sup>	
NEM	NEM		X		X		X	X			X
Non-NEM	NEM		X <sup>b</sup>		X <sup>b</sup>		X <sup>b</sup>	X			X <sup>a,b</sup>
Simultaneous NEM and Non-NEM		X		X		X		X		X <sup>a</sup>	

- a) Proration will be based upon the annual expected energy output (kWh) derived from the nameplate of the Generator(s) modified by technology-specific capacity/availability factors of all NEM eligible versus non-NEM eligible Generators for the costs that cannot be clearly assigned to either type of tariff.
- b) Change of operation of a non-NEM eligible Generator at any time to export is treated as a simultaneous NEM and non-NEM Interconnection Request, resulting in associated costs being allocated to Producer.

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**GENERATING FACILITY INTERCONNECTIONS**

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**E. INTERCONNECTION REQUEST SUBMISSION PROCESS (Cont'd.)** (N)

**5. INTERCONNECTION REQUEST VALIDATION AND ASSIGNMENT OF QUEUE POSITION**

Any Applicant for Interconnection to Distribution Provider's Distribution or Transmission System must submit a complete and valid Interconnection Request. An Interconnection Request will be considered complete and valid when all items required for an Interconnection Request have been received by Distribution Provider and deemed valid by Distribution Provider.

**a. Acknowledgement of Interconnection Request**

Distribution Provider shall provide a first written notification to the Interconnection Customer within ten (10) Business Days of receipt of the Interconnection Request, which notice shall state whether the Interconnection Request is deemed complete and valid.

**b. Deficiencies in Interconnection Request**

**i) First Notification of Deficiency**

If an Interconnection Request fails to meet the requirements, Distribution Provider shall state in its first written notification the reasons for such failure and that the Interconnection Request does not constitute a valid request.

Applicant shall provide Distribution Provider the additional requested information needed to constitute a complete and valid request within ten (10) Business Days from the date of the first written notification that the Interconnection Request is invalid.

**ii) Second Notification of Deficiency**

Distribution Provider shall provide a second written notification to Applicant within ten (10) Business Days of receipt of the additional requested information, stating whether the Interconnection Request is valid or the reasons for any failure.

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**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 50

**E. INTERCONNECTION REQUEST SUBMISSION PROCESS (Cont'd.)** (N)

**5. INTERCONNECTION REQUEST VALIDATION AND ASSIGNMENT OF QUEUE POSITION (Cont'd.)**

**b. Deficiencies in Interconnection Request (Cont'd.)**

**ii) Second Notification of Deficiency**

Applicant shall provide Distribution Provider the additional requested information needed to constitute a complete and valid request within five (5) Business Days from the date of the second written notification that the Interconnection Request is invalid.

**iii) Extension Request**

Upon request, Applicant can receive one extension of up to twenty (20) Business Days to resolve deficiencies in the Interconnection Request.

**iv) Failure to Resolve Deficiencies**

If Applicant does not resolve deficiencies in the Interconnection Request within the time frames set out above, Distribution Provider will deem the Interconnection Request withdrawn. Applicant may submit a new Interconnection Request.

Applicants with invalid Interconnection Requests under this Section may seek relief under the dispute resolution provisions in Section K by so notifying Distribution Provider within two (2) Business Days of receipt of the first or second written notification that the Interconnection Request is incomplete and/or invalid.

(N)

(Continued)

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30230-E

**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 51

**E. INTERCONNECTION REQUEST SUBMISSION PROCESS (Cont'd.)** (N)

**5. INTERCONNECTION REQUEST VALIDATION AND ASSIGNMENT OF QUEUE POSITION (Cont'd.)**

**c. Assignment of Queue Position**

Distribution Provider shall assign a queue position to all non-Net Energy Metering Applicants. If there were no deficiencies in the Interconnection Request, the queue position will be based on the date Distribution Provider received the Interconnection Request. If there were deficiencies in the Interconnection Request, the queue position will be based on the date Distribution Provider determines an Interconnection Request to be complete and valid. Should Distribution Provider not meet any deadline for providing the first (Section [E.5.b.iE.5.b.i](#)) or second written notification (Section E.5.b.ii) to Applicant regarding the Interconnection Request, Applicant's queue position shall be set on the final day of the period in which Distribution Provider was obligated to provide such written notification, provided, however, that Applicant meets deadlines as set out above to submit any additional information required for a valid Interconnection Request following such written notification under Section E.5.b.i or E.5.b.ii, and that Distribution Provider determines that the Interconnection Request is valid.

Distribution Provider shall maintain a single queue for all non-Net Energy Metering Interconnection Requests governed by this Rule with a Point of Interconnection on Distribution Provider's Distribution System. For Interconnection Requests that are studied under the Distribution Group Study Process, the effective queue position for all Interconnection Requests in a Distribution Study Group will be established on the last day of the Distribution Group Study window for that Distribution Study Group. For Interconnection Requests that are studied under the Transmission Cluster Study Process, the queue position will be the applicable cluster's queue position.

(N)

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**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 52

**E. INTERCONNECTION REQUEST SUBMISSION PROCESS (Cont'd.)** (N)

**5. INTERCONNECTION REQUEST VALIDATION AND ASSIGNMENT OF QUEUE POSITION (Cont'd.)**

**d. Publication of the Interconnection Queue**

Distribution Provider shall publish and update monthly on its website the interconnection queue for all Interconnection Requests governed by this Rule with a Point of Interconnection on Distribution Provider's Distribution System that have been assigned a queue position. Nothing here prohibits Distribution Provider from publishing this queue combined with other interconnection requests to Distribution Provider's Distribution System. The published interconnection queue may include the following information for each Interconnection Request governed by this Rule, subject to Energy Division approval:

**i) Interconnection Request and Queue Position Data**

- (i1) The assigned number, if any;
- (ii2) the queue position;
- (iii3) the date the Interconnection Request was received by Distribution Provider;
- (iv4) the date the Interconnection Request was determined to be complete and valid;
- (v5) the review process to which Applicant originally applied (Fast Track, Independent Study Process, ~~Transmission Cluster Study Process~~ Distribution Group Study Process, or WDT Cluster Study Process);
- (vi6) the original requested In-Service Date;
- (vii7) the currently requested In-Service Date;
- (viii8) the agreed-upon Commercial Operation Date or actual Commercial Operation Date.

(N)

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**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 53

**E. INTERCONNECTION REQUEST SUBMISSION PROCESS (Cont'd.)** (N)

**5. INTERCONNECTION REQUEST VALIDATION AND ASSIGNMENT OF QUEUE POSITION (Cont'd.)**

**d. Publication of the Interconnection Queue (Cont'd.)**

**ii) Applicant Generating Facility/Storage System and Point of Interconnection Data**

- (i1\*) the maximum summer and winter MW electrical output;
- (x2) the type of generating or storage facility to be constructed;
- (xi3) the fuel source;
- (xii4) the proposed Point of Interconnection location by county;
- (xiii5) the proposed Point of Interconnection location by substation/area and, if applicable, circuit.

**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS**

**1. OVERVIEW OF THE INTERCONNECTION REVIEW PROCESS**

**a. Valid Interconnection Request**

After an Interconnection Request is deemed complete and valid, Distribution Provider will perform Fast Track evaluation unless an Applicant applies for Detailed Study or is not eligible for Fast Track evaluation. The eligibility requirements for Fast Track evaluation are set forth in Section E.2.b. See Section D.13 for special provisions related to the timeframe and costs applicable to NEM Applicants.

(N)

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**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

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**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)** (N)

**1. OVERVIEW OF THE INTERCONNECTION REVIEW PROCESS**  
(Cont'd.)

**b. Fast Track Review**

Fast Track evaluation allows for rapid review of the Interconnection of those Generating Facilities that do not require Detailed Study. Regardless of study process, all Generating Facilities shall be designed to meet the applicable requirements of Section H which identifies Generating Facility Design and Operation Requirements.

Fast Track review consists of an Initial Review and, if required, a Supplemental Review. The need for Supplemental Review will be determined based on the results of Initial Review Screens A through M in Section G.1. Applicants that successfully pass Initial Review Screens A through M will be allowed to interconnect without Supplemental Review.

If Supplemental Review is required, Distribution Provider will notify Applicant and Applicant must pay a nonrefundable Supplemental Review fee or withdraw its Interconnection Request. Supplemental Review shall consist of the application of Screens N through P in Section G.2. Applicants that pass Screens N through P will be allowed to interconnect without additional review.

If Supplemental Review reveals that a proposed Generating Facility cannot be interconnected to Distribution Provider's Distribution System by means of Fast Track evaluation, Distribution Provider will notify Applicant that Detailed Study will be required.

Failure to pass Fast Track evaluation means only that further review and/or study are required before the Generating Facility can be interconnected with Distribution Provider's Distribution System. It does not mean that the Generating Facility cannot be interconnected.

(N)

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**GENERATING FACILITY INTERCONNECTIONS**

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**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)**

(N)

**1. OVERVIEW OF THE INTERCONNECTION REVIEW PROCESS (Cont'd.)**

**c. Detailed Studies**

Detailed Study will be required for Interconnection Requests that apply directly for Detailed Study, are not eligible for Fast Track evaluation, or do not pass Fast Track evaluation. Detailed Study shall consist of one of three study processes: (i) Independent Study Process; (ii) Distribution Group Study Process; or (iii) Transmission Cluster Study Process. The specific study process that is applied will depend on the results of Screens Q and R in Section G.3. Interconnection Requests that are found to be electrically interdependent with earlier-queued interconnection requests with impacts on the Transmission System, and thereby fail screen Q, will proceed to the Transmission Cluster Study Process. Interconnection Requests that are not electrically interdependent with earlier-queued interconnection requests with impacts on the Transmission System, and thereby pass Screen Q, will be studied under either the Independent Study Process or the Distribution Group Study Process, depending on the results of Screen R.

**d. Compliance with Timelines**

Distribution Provider shall use Reasonable Efforts in meeting all the timelines set out in this Rule, or mutually modified by Distribution Provider and Applicant pursuant to Section D.15. Each Distribution Provider shall designate an ombudsman with authority to resolve disputes over missed timelines. The identity, role, and contact information of the ombudsman shall be available on Distribution Provider's website.

If at any time an Applicant is dissatisfied with the Reasonable Efforts of Distribution Provider to meet the timelines in this Section, Applicant may use the following procedures:

- (i) Contact the ombudsman designated by Distribution Provider;
- (ii) If the Distribution Provider ombudsman is unable to resolve the dispute within ten (10) Business Days, Applicant may either:
  - a) Contact the Consumer Affairs Branch (CAB) at the Commission.

(N)

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**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 56

**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)**

(N)

**1. OVERVIEW OF THE INTERCONNECTION REVIEW PROCESS (Cont'd.)**

**d. Compliance with Timelines (Cont'd.)**

- b) Upon mutual agreement with Distribution Provider, make a written request for mediation to the Alternative Dispute Resolution (ADR) Coordinator in the Commission's Administrative Law (ALJ) Division. The request may be made by electronic mail to [adr\\_program@cpuc.ca.gov](mailto:adr_program@cpuc.ca.gov), and shall state "Rule 21" in the subject line. The request shall contain the relevant facts of the timeline dispute. A copy of the request shall be sent to the Distribution Provider ombudsman. Provided that resources are available, the mediator assigned shall schedule a mediation with Applicant and Distribution Provider within ten (10) Business Days of receiving the request.

At any time, Applicant may file a formal complaint before the Commission pursuant to California PUC Section 1702 and Article 4 of the Commission's Rules of Practice and Procedure.

**2. FAST TRACK INTERCONNECTION REVIEW PROCESS**

**a. Initial Review**

Upon receipt of a complete and valid Interconnection Request, Distribution Provider shall perform Initial Review using the process in Section G.1. The Initial Review determines if (i) the Generating Facility qualifies for Fast Track Interconnection through Initial Review, or (ii) the Generating Facility requires a Supplemental Review. Absent extraordinary circumstances, Distribution Provider shall notify Applicant in writing of the results of Initial Review within fifteen (15) Business Days following validation of an Interconnection Request.

(N)

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**GENERATING FACILITY INTERCONNECTIONS**

Sheet 57

**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)** (N)

**2. FAST TRACK INTERCONNECTION REVIEW PROCESS (Cont'd.)**

**a. Initial Review (Cont'd.)**

For Interconnection Requests that pass Initial Review and do not require Interconnection Facilities or Distribution Upgrades, Distribution Provider shall provide Applicant with a Generator Interconnection Agreement within fifteen (15) Business Days of providing notice of Initial Review results. For Interconnection Requests that pass Initial Review but do require Interconnection Facilities or Distribution Upgrades, within fifteen (15) Business Days of providing notice of Initial Review results, Distribution Provider shall provide Applicant with a non-binding cost estimate of the Interconnection Facilities or Distribution Upgrades.

For all Interconnection Requests that pass Initial Review, refer to Section F.2.e for cost responsibility and time frames for completing the Generator Interconnection Agreement.

For Interconnection Requests that fail Initial Review, Distribution Provider shall provide the technical reason, data and analysis supporting the Initial Review results in writing and provide Applicant the option to either attend an Initial Review results meeting or proceed directly to Supplemental Review. Net Energy Metering Applicants covered under Section D.13.1 shall proceed directly to Supplemental Review without an Initial Review results meeting. Applicant shall notify Distribution Provider within ten (10) Business Days following such notification whether to (i) proceed to an Initial Review results meeting, (ii) proceed to Supplemental Review, or (iii) withdraw the Interconnection Request. Applicant may request one extension of no more than ten (10) Business Days to respond. If Applicant fails to notify Distribution Provider within ten (10) Business Days of such notification, or at the end of the extension, if one was requested, the Interconnection Request shall be deemed withdrawn.

No changes may be made to the planned Point of Interconnection or Generating Facility size included in the Interconnection Request during the Initial Review Process, unless such changes are agreed to by Distribution Provider. Where agreement has not been reached, Applicants choosing to change the Point of Interconnection or Generating Facility size must reapply and submit a new Interconnection Request.

(N)

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**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 58

**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)**

(N)

**2. FAST TRACK INTERCONNECTION REVIEW PROCESS (Cont'd.)**

**a. Initial Review (Cont'd.)**

Applicants that elect to proceed to Supplemental Review shall provide a nonrefundable Supplemental Review fee set forth in Section E.2.c with their response. The Supplemental Review fee shall be waived for Interconnection Requests requesting Interconnection pursuant to PUC Sections 2827, 2827.8, or 2827.10, per Commission Decision D. 02-03-057 and for solar-powered Generating Facilities that do not sell power to Distribution Provider, per Commission Decision D. 01-07-027.

**b. Optional Initial Review Results Meeting**

Within five (5) Business Days of Applicant's request for an Initial Review results meeting, Distribution Provider shall contact Applicant and offer to convene a meeting at a mutually acceptable time to review the Initial Review screen analysis and related results to determine what modifications, if any, may permit the Generating Facility to be connected safely and reliably without Supplemental Review.

If modifications that obviate the need for Supplemental Review are identified, and Applicant and Distribution Provider agree to such modifications, Distribution Provider shall provide Applicant with a Generator Interconnection Agreement within fifteen (15) Business Days of the Initial Review results meeting if no Interconnection Facilities or Distribution Upgrades are required. If Interconnection Facilities or Distribution Upgrades are required, Distribution Provider shall provide Applicant with a non-binding cost estimate of any Interconnection Facilities or Distribution Upgrades within fifteen (15) Business Days of the Initial Review results meeting. For all Interconnection Requests that pass Initial Review, refer to Section F.2.e for cost responsibility and time frames for completing the Generator Interconnection Agreement.

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**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 59

**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)**

(N)

**2. FAST TRACK INTERCONNECTION REVIEW PROCESS (Cont'd.)**

**b. Optional Initial Review Results Meeting (Cont'd.)**

If Applicant and Distribution Provider are unable to identify or agree to modifications that enable Applicant to pass Initial Review, Applicant shall notify Distribution Provider within five (5) Business Days of the Initial Review results meeting whether it would like to proceed with Supplemental Review or withdraw its Interconnection Request. Applicant may request one extension of no more than five (5) Business Days to respond. If Applicant fails to notify Distribution Provider within five (5) Business Days of the Initial Review results meeting, or at the end of the extension, if one was requested, the Interconnection Request shall be deemed withdrawn.

**c. Supplemental Review**

If Applicant requests Supplemental Review and submits a nonrefundable Supplemental Review fee, if required, Distribution Provider shall complete Supplemental Review within twenty (20) Business Days, absent extraordinary circumstances, following authorization and receipt of the fee. Supplemental Review determines if (i) the Generating Facility qualifies for Fast Track Interconnection, or (ii) the Generating Facility requires Detailed Study.

For Interconnection Requests that pass Supplemental Review and do not require Interconnection Facilities or Distribution Upgrades, Distribution Provider shall provide Applicant with a Generator Interconnection Agreement within fifteen (15) Business Days of providing notice of Supplemental Review results. For Interconnection Requests that pass Supplemental Review and do require Interconnection Facilities or Distribution Upgrades, within fifteen (15) Business Days of providing notice of Supplemental Review results, Distribution Provider shall provide Applicant with a non-binding cost estimate of any Interconnection Facilities or Distribution Upgrades. For all Interconnection Requests that pass Supplemental Review, refer to Section F.2.e for cost responsibility and time frames for completing the Generator Interconnection Agreement.

(N)

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**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 60

**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)** (N)

**2. FAST TRACK INTERCONNECTION REVIEW PROCESS (Cont'd.)**

**c. Supplemental Review (Cont'd.)**

For Interconnection Requests that fail Supplemental Review, Distribution Provider shall provide the technical reason, data and analysis supporting the Supplemental Review results in writing, including, if Distribution Provider can make the determination, which Detailed Study track Applicant qualifies for, and provide Applicant the option to attend a Supplemental Review results meeting or proceed directly to Detailed Study. Applicant shall notify Distribution Provider within fifteen (15) Business Days following such notification whether to (i) proceed to a Supplemental Review results meeting, (ii) proceed to Detailed Study, or (iii) withdraw the Interconnection Request. Applicant may request one extension of no more than fifteen (15) Business Days to respond. If Applicant fails to notify Distribution Provider within fifteen (15) Business Days of such notification, or at the end of the extension, if one was requested, the Interconnection Request shall be deemed withdrawn.

Applicants that elect to proceed to Detailed Study shall provide the applicable study deposit set forth in Section E.3.a with their response. Detailed Study fees for solar Generating Facilities up to 1 MW interconnecting to the Distribution System that do not sell power to Distribution Provider will be waived up to the amount of \$5,000. Generating Facilities eligible for Net Energy Metering under PUC Sections 2827, 2827.8, or 2827.10 are exempt from any costs associated with Detailed Studies.

**d. Optional Supplemental Review Results Meeting**

Within five (5) Business Days of Applicant's request for a Supplemental Review results meeting, Distribution Provider shall contact Applicant and offer to convene a meeting at a mutually acceptable time to review the Supplemental Review screen analysis and related results to determine what modifications, if any, may permit the Generating Facility to be connected safely and reliably without Detailed Study.

(N)

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**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 61

**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)** (N)

**2. FAST TRACK INTERCONNECTION REVIEW PROCESS (Cont'd.)**

**d. Optional Supplemental Review Results Meeting (Cont'd.)**

If modifications that obviate the need for Detailed Study are identified and Applicant and Distribution Provider agree to such modifications, Distribution Provider shall provide Applicant with a Generator Interconnection Agreement within fifteen (15) Business Days of the Supplemental Review results meeting if no Interconnection Facilities or Distribution Upgrades are required. If Interconnection Facilities or Distribution Upgrades are required, Distribution Provider shall provide Applicant with a non-binding cost estimate of any Interconnection Facilities or Distribution Upgrades within fifteen (15) Business Days of the Supplemental Review results meeting. For all Interconnection Requests that pass Supplemental Review, refer to Section F.2.e for cost responsibility and time frames for completing the Generator Interconnection Agreement.

If Applicant and Distribution Provider are unable to identify or agree to modifications, Applicant shall notify Distribution Provider within twenty (20) Business Days of the Supplemental Review Results Meeting whether it would like to proceed with Detailed Study or withdraw its Interconnection Request. Applicant may request one extension of no more than twenty (20) Business Days to respond. If Applicant fails to notify Distribution Provider within twenty (20) Business Days of the Supplemental Review results meeting, or at the end of the extension, if one was requested, the Interconnection Request shall be deemed withdrawn. Applicants that elect to proceed to Detailed Study shall provide the applicable study deposit set forth in Section E.3.a.

**e. Execution of the Generator Interconnection Agreement**

Following the receipt of a cost estimate for any Distribution Upgrades and/or Interconnection Facilities that have been identified (Applicants that did not require a cost estimate may proceed directly to the paragraph below), Applicant shall notify Distribution Provider within fifteen (15) Business Days whether Applicant: (i) requests a Generator Interconnection Agreement, or (ii) withdraws its Interconnection Request. Applicant may request one extension of no more than fifteen (15) Business Days to respond. If Applicant fails to notify Distribution Provider within fifteen (15) Business Days, or at the end of the extension, if one was requested, the Interconnection Request shall be deemed withdrawn.

(N)

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**GENERATING FACILITY INTERCONNECTIONS**

Sheet 62

**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)** (N)

**2. FAST TRACK INTERCONNECTION REVIEW PROCESS (Cont'd.)**

**e. Execution of the Generator Interconnection Agreement (Cont'd.)**

If Applicant elects to proceed to a Generator Interconnection Agreement, Distribution Provider shall provide Applicant with a Generator Interconnection Agreement for Applicant's signature within fifteen (15) Business Days of Applicant's request.

Upon receipt of a draft Generator Interconnection Agreement, Applicant has ninety (90) Calendar Days to sign and return the Generator Interconnection Agreement. Applicant shall provide written comments, or notification of no comments, to the draft Generator Interconnection Agreement and appendices within thirty (30) Calendar Days. At the request of Applicant, Distribution Provider shall begin negotiations with Applicant at any time after Distribution Provider provides Applicant with the draft Generator Interconnection Agreement, which contains in its appendices the cost estimate for any Distribution Upgrades and/or Interconnection Facilities that have been identified by Distribution Provider. Distribution Provider and Applicant shall negotiate concerning the cost estimate, or any disputed provisions of the appendices to a draft Generator Interconnection Agreement, for not more than ninety (90) Calendar Days after Distribution Provider provides Applicant with the Generator Interconnection Agreement. If Applicant determines that negotiations are at an impasse, it may request termination of the negotiations and initiate Dispute Resolution procedures pursuant to Section K. If Applicant fails to sign the Generator Interconnection Agreement or initiate Dispute Resolution within ninety (90) Calendar Days, the Interconnection Request shall be deemed withdrawn.

After Applicant, or a Producer where those are different entities, has executed the Generator Interconnection Agreement, Distribution Provider will commence design, procurement, construction and installation of Distribution Provider's Distribution Upgrades and/or Interconnection Facilities that have been identified in the Generator Interconnection Agreement. Distribution Provider and Producer will use good faith efforts to meet schedules in accordance with the requirements of the Generator Interconnection Agreement and estimated costs as appropriate. Producer is responsible for all costs associated with Parallel Operation to support the safe and reliable operation of the Distribution System and Transmission System as set forth in Section E.4.

(N)  
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**GENERATING FACILITY INTERCONNECTIONS**

Sheet 63

**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.) (N)**

**2. FAST TRACK INTERCONNECTION REVIEW PROCESS (Cont'd.)**

**e. Execution of the Generator Interconnection Agreement (Cont'd.)**

Distribution Provider and Producer shall negotiate in good faith concerning a schedule for the construction of Distribution Provider's Interconnection Facilities and Distribution Upgrades.

**3. DETAILED STUDY INTERCONNECTION REVIEW PROCESS**

**a. Detailed Study Track Selection Process**

Applicants that apply directly for Detailed Study may elect to enter the Transmission Cluster Study Process without the application of Screens Q and R. For Applicants that applied for Fast Track evaluation but failed the Supplemental Review, Distribution Provider shall determine, to the extent practicable, the Detailed Study track for which Applicant is eligible and provide that information with the Supplemental Review Results as set out in section F.2.c. For all other Applicants, the specific Detailed Study track for which Applicant is eligible will be determined by the application of Screens Q and R. For Applicants that require application of Screens Q and R, absent extraordinary circumstances, within twenty (20) Business Days following validation of an Interconnection Request and receipt of the appropriate study deposit set forth in Section E.3.a, Distribution Provider will apply Screen Q, and if applicable, Screen R and provide Applicant with the screen results as set forth below.

If Applicant fails Screen Q, Distribution Provider shall provide the data and analysis supporting Screen Q results in writing. The Interconnection Request will be processed in accordance with Section F.3.c below and provide Applicant the option to proceed to the Transmission Cluster Study Process. Applicant shall notify Distribution Provider within twenty (20) Business Days following such notification whether it would like to (i) proceed to the Transmission Cluster Study Process or (ii) withdraw the Interconnection Request. Applicant may request one extension of no more than twenty (20) Business Days to respond. If Applicant fails to notify Distribution Provider within twenty (20) Business Days of receiving the Screen Q results, or at the end of the extension, if one was requested, the Interconnection Request shall be deemed withdrawn.

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**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)**

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**3. DETAILED STUDY INTERCONNECTION REVIEW PROCESS**

**a. Detailed Study Track Selection Process (Cont'd.)**

If Applicant elects to proceed to the Distribution Group Study Process, the Interconnection Request will be processed in accordance with Section F.3.b below.

If Applicant elects to proceed to the Transmission Cluster Study Process, Interconnection Request will be processed in accordance with Section F.3.c below.

**db. Independent Distribution Group Study Process**

**i) Initiation of Distribution Study Process - Group**

To be eligible for inclusion in a Distribution Study Group, Applicant must submit all materials required to complete their Interconnection Request no later than 10 business days after the close of the relevant Distribution Group Study window. This includes notification from Applicant that they want to proceed with the Distribution Group Study Process, if applicable.

Distribution Provider shall perform an Electric Independence Test for the group within twenty (20) Business Days of the close of the window, using the best available information about projects that have entered the group study process under Rule 21 and the WDT.

If the group fails Screen Q, the Distribution Provider will deem the projects withdrawn from Rule 21 and notify Applicants. Applicants may elect to proceed with the Transmission Cluster Study Process, pursuant to Section F.3.c.

In order to be eligible to participate in the DGS Phase I Interconnection Study, Scoping Meeting must be complete and the Applicant must execute the Detailed Study Agreement prior to the start date of the DGS Phase I Interconnection Study.

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**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)**

(N)

**3. DETAILED STUDY INTERCONNECTION REVIEW PROCESS (Cont'd.)**

**db. Independent Distribution Group Study Process (Cont'd.)**

**Study Processii) Scoping Meeting**

Within five (5) Business Days after Distribution Provider ~~notifies~~performs the Electrical Independence Test, it will ~~notifies~~contact the Applicant to notify them that the Interconnection Request has passed Screens Q and ~~failed Screen~~ R and is thus eligible for the ~~Independent Distribution Group~~ Study Process, ~~Distribution Provider shall contact Applicant to and~~ establish a date agreeable to Applicant and Distribution Provider for a scoping meeting.

The Distribution Provider, in coordination with the CAISO, if applicable, shall determine whether the Interconnection Request is at or near the boundary of an Affected System(s) so as to potentially impact such Affected System(s). If a determination of potential impact is made, the Distribution Provider shall invite the Affected System Operator(s) to the Scoping Meeting by informing them of the time and place of the scheduled Scoping Meeting as soon as practicable.

~~b. Distribution Group Study Process (Cont'd.)~~The purpose of the scoping meeting shall be: (i) to discuss reasonable Commercial Operation Dates and alternative interconnection options; (ii) to exchange information, including any transmission data that would reasonably be expected to impact Applicant's interconnection options; (iii) to analyze such information; ~~and~~ (iv) to determine feasible Points of Interconnection and eliminate alternatives given resources and available information; ~~and (v) to advise Applicant of the expected start date of the next applicable Distribution Group Study~~DGS Phase I Interconnection Study.

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**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)**

**3. DETAILED STUDY INTERCONNECTION REVIEW PROCESS (Cont'd.)**

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~~a. Detailed Study Track Selection Process (Cont'd.)~~

~~If Applicant passes Screen Q, but fails Screen R, Distribution Provider shall provide the data and analysis supporting the Screen R results in writing and provide Applicant the option to proceed to the Distribution Group Study Process.~~

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**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)** (N)

**3. DETAILED STUDY INTERCONNECTION REVIEW PROCESS (Cont'd.)**

**db. Independent Distribution Group Study Process (Cont'd.)**

**ii) Scoping Meeting (Cont'd.)**

**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)**

**21 3. DETAILED STUDY INTERCONNECTION REVIEW PROCESS (Cont'd.)**

Distribution Provider will bring to the scoping meeting, as reasonably necessary to accomplish its purpose, such already available technical data, including, but not limited to: (i) general facility loadings, (ii) general instability issues, (iii) general short circuit issues, (iv) general voltage issues, and (v) general reliability issues.

Applicant will bring to the scoping meeting, in addition to the technical data in Attachment A of the Rule 21 Exporting Generating Facility Interconnection Request form, any system studies previously performed. Distribution Provider, the CAISO, if applicable, and Applicant will also bring to the meeting personnel and other resources as may be reasonably required to accomplish the purpose of the meeting in the time allocated for the meeting.

During the meeting, Applicant shall designate its Point of Interconnection. The duration of the meeting shall be only what is sufficient to accomplish its purpose.

Within fifteen (15) Business Days after the scoping meeting, Distribution Provider shall provide Applicant with an Independent Detailed Study Process Study Agreement, which shall contain an outline of the scope of the DGS Phase I Interconnection System Impact Study and DGS Phase II Interconnection Facilities Study, contain a non-binding good faith estimate of the cost to perform such studies, and shall specify that Applicant is responsible for the actual cost of the Interconnection Studies, including reasonable

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administrative costs. Applicant shall execute and deliver to Distribution Provider the Detailed Study Agreement no later than thirty (30) Business Days after the scoping meeting start date of the DGS Phase I Interconnection Study, or the Interconnection Request shall be deemed withdrawn.

~~i. If Applicant fails Screen R because there is only one (1) earlier queued interconnection request with which Applicant is electrically interdependent and that is currently undergoing an independent study process, Distribution Provider shall notify Applicant at the same time that it provides the Screen R results of the expected completion date for the earlier queued interconnection request. Distribution Provider shall provide Applicant the option of (1) waiting until the earlier queued interconnection request has completed the independent study process and then initiating the Independent Study Process at that time, or (2) proceeding directly to the Transmission Cluster Study Process pursuant to Section F.3.c. If Applicant chooses option 1, the timeline for completing Applicant's Independent Study Process will not begin until the earlier queued interconnection request has completed the independent study process.~~

~~ii. At Distribution Provider's option, it may offer to study any Applicant that qualifies under this Section F.3.b under the Independent Study Process; provided that Applicant and Distribution Provider agree on a revised study timeline.~~

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**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)**

(N)

**3. DETAILED STUDY INTERCONNECTION REVIEW PROCESS (Cont'd.)**

**db. Independent Distribution Group Study Process (Cont'd.)**

**iii) Grouping of Interconnection Requests for a Distribution Group Study**

The results of Screen R will determine the Interconnection Requests to be grouped together for each Distribution Group Study. An Interconnection Request that failed Screen R will be grouped with other projects that are determined to be electrically interdependent through the application of Screen R. No later than the date a DGS Phase I Interconnection Study begins, Distribution Provider will send to each Applicant in a Distribution Group Study a list of the Interconnection Requests in its Distribution Group Study.

At the Distribution Provider's option, an Interconnection Request received during a particular Distribution Group Study Application window may be studied individually (Independent Study Process) or in a Distribution Group Study for the purpose of conducting one or more of the analyses forming the Interconnection Studies. For each Interconnection Study received within the same Distribution Group Study Application window, the Distribution Provider may develop one or more Distribution Study Groups.

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F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)

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3. DETAILED STUDY INTERCONNECTION REVIEW PROCESS  
(Cont'd.)

b. Distribution Group Study Process (Cont'd.)

iv) Timing of the the DGS Phase I Interconnection Study.

Absent extraordinary circumstances, Distribution Provider shall complete and issue a final DGS Phase I Interconnection Study report within sixty (60) Business Days from the start of the study. If the DGS Phase I Interconnection Study indicates a need for Network Upgrades, Distribution Provider will share applicable study results with the CAISO for review and comment and will incorporate comments into the final DGS Phase I Interconnection Study report.

System Impact At any time Distribution Provider determines that it will not meet the required time frame for completing the DGS Phase I Interconnection System Impact Study, Distribution Provider shall notify all

Applicants in the Distribution Study Group as to the status of the DGS Phase I Interconnection System Impact Study and provide an estimated completion date with an explanation of the reasons why additional time is required.

Upon request, Distribution Provider shall provide any Applicant in the Distribution Study Group all relevant supporting documentation, workpapers and pre-Interconnection Request and post-Interconnection Request power flow, short circuit and dynamic/stability databases, and currently planned Distribution Upgrades relevant to the Interconnection Request for the DGS Phase I Interconnection Study. Applicant may be required to sign a non-disclosure agreement with terms consistent with Section D.7 regarding Confidentiality.

If applicable, Distribution Provider will share the applicable study results with the CAISO for review and comment, and will incorporate CAISO comments, if any, into the study report prior to issuing a final DGS Phase I Interconnection Study report to Applicants in the Distribution Study Group.

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(Cont'd.) Applicant shall execute and deliver to Distribution Provider the Independent Study Process Study Agreement no later than thirty (30) Business Days after the scoping meeting. Or the Interconnection Request shall be deemed withdrawn.

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~~On the basis of the meeting, Applicant shall designate its Point of Interconnection. The duration of the meeting shall be only what is sufficient to accomplish its purpose.~~

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~~F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)~~

~~3. DETAILED STUDY INTERCONNECTION REVIEW PROCESS (Cont'd.)~~

~~d. Independent Study Process (Cont'd.)~~

~~ii) ii)~~

~~ii) Timing of the Interconnection System Impact Study Results.~~

~~Absent extraordinary circumstances, Distribution Provider shall complete and issue a final Interconnection System Impact Study report within (60) Business Days after the execution of an Independent Study Process Study Agreement study. If the System Impact Study indicates a need for Network Upgrades, Distribution Provider will share applicable study results with the CAISO for review and comment and will incorporate comments into the final Interconnection System Impact Study report.~~

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~~F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)~~

~~3. DETAILED STUDY INTERCONNECTION REVIEW PROCESS (Cont'd.)~~

~~d. Independent Study Process (Cont'd.)~~

~~ii) Timing of the Interconnection F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)~~

~~3. DETAILED STUDY INTERCONNECTION REVIEW PROCESS (Cont'd.)~~

~~b. Distribution Group Study Process (Cont'd.)~~

~~iii) DGS Phase I Interconnection System Impact Study Results Meeting.~~

If requested by an Applicant in a Distribution Study Group, a results meeting shall be held among Distribution Provider, the CAISO, if applicable, and the Applicant to discuss the results of

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the DGS Phase I Interconnection System Impact Study, including assigned cost responsibility. Within five (5) Business Days of such request, Distribution Provider shall contact Applicant to establish a date agreeable to Applicant, Distribution Provider and the CAISO, if applicable, for the results meeting. If Applicant wants to have a meeting, it must be completed within thirty (30) Calendar Days of the final DGS Phase I Interconnection Study, unless mutually agreed upon by the Distribution Provider and Applicant.

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At the Phase I Interconnection Study results meeting, the Applicant shall provide a schedule outlining key milestones including environmental survey start date, expected environmental permitting submittal date, expected procurement date of project equipment, back-feed date for project construction, and expected project construction date. This will assist the parties in determining if proposed Commercial Operation Dates are reasonable. If large-scale Distribution Provider's Interconnection Facilities or Distribution Upgrades for the Generating Facility have been identified in the DGS Phase I Interconnection Study, such as telecommunications equipment to support a possible special protection system (SPS), distribution feeders to support back feed, a new substation, and/or expanded substation work, permitting and material procurement lead times may result in the need to alter the proposed Commercial Operation Date, the Applicant and Distribution Provider may agree to a new Commercial Operation Date. In addition, where an Applicant intends to establish Commercial Operation separately for different Electric Generating Units or project phases at its Generating Facility, it may only do so in accordance with an implementation plan agreed to in advance by the Distribution Provider and the CAISO, if applicable, which agreement shall not be unreasonably withheld.

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**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)**

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**3. DETAILED STUDY INTERCONNECTION REVIEW PROCESS (Cont'd.)**

**db. Independent Distribution Group Study Process (Cont'd.)**

**iv) DGS Phase I Interconnection System Impact Study Results Meeting (Cont'd.)**

Where the parties cannot agree to a revised Commercial Operation Date, the Commercial Operation Date determined reasonable by the Distribution Provider will be used for the DGS Phase II Interconnection Study where the revised Commercial Operation Date is needed to accommodate the anticipated completion, assuming Reasonable Efforts by the Distribution Provider of necessary Distribution Upgrades and/or Distribution Provider's Interconnection Facilities, pending the outcome of any relief sought by the Applicant under Sections F.1.d. or K. The Applicant must notify the Distribution Provider within five (5) Business Days following the Results Meeting if it is initiating dispute procedures under Sections F.1.d. or K.

Distribution Provider and the Applicant shall hold a results meeting to discuss the results of the DGS Phase I Interconnection Study, including assigned cost responsibility.

Within five (5) Business Days following the DGS Phase I Interconnection Study results meeting, the Applicant shall submit to the Distribution Provider all requested information.

**vi) Initial Posting of Interconnection Financial Security.**

Each Applicant in a Distribution Study Group shall make its initial posting of Interconnection Financial Security in accordance with the requirements of Section F.4.b, within sixty (60) Calendar Days after being provided with the final DGS Phase I Interconnection Study report, or its Interconnection Request shall be deemed withdrawn. The initial posting of Interconnection Financial

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~~Security will be based on the cost responsibility for Network Upgrades, Distribution Upgrades, and Distribution Provider's Interconnection Facilities set forth in the final DGS Phase I Interconnection Study report.iv) Initial Posting of Interconnection Financial Security.~~

~~Applicant shall make its initial posting of Interconnection Financial Security in accordance with the requirements of Section F.4.b, within sixty (60) Calendar Days after being provided with the final Interconnection System Impact Study report, or its Interconnection Request shall be deemed withdrawn. The initial posting of Interconnection Financial Security will be based on the cost responsibility for Network Upgrades, Distribution Upgrades, and Distribution Provider's Interconnection Facilities set forth in the final Interconnection System Impact Study report.~~

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**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)**

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**3. DETAILED STUDY INTERCONNECTION REVIEW PROCESS (Cont'd.)**

**db. Independent Distribution Group Study Process (Cont'd.)**

**vi) Modifications**

At any time during the course of the Interconnection Studies, Applicant, Distribution Provider, or the CAISO, as applicable, may identify changes to the planned Interconnection that may improve the costs and benefits (including reliability) of the Interconnection, and the ability of the proposed change to accommodate the Interconnection Request. To the extent the identified changes are acceptable to Distribution Provider, the CAISO, as applicable, and Applicant, such acceptance not to be unreasonably withheld, Distribution Provider shall modify the Point of Interconnection and/or configuration in accordance with such changes without altering the Interconnection Request's eligibility for participating in Interconnection Studies.

At the DGS Phase I Interconnection System Impact Study results meeting, Applicant should be prepared to discuss any desired modifications to the Interconnection Request. After the publication of the final DGS Phase I Interconnection System Impact Study report, but no later than five (5) Business Days following the DGS Phase I Interconnection System Impact Study results meeting, Applicant shall submit to Distribution Provider, in writing, modifications to any information provided in the Interconnection Request. Distribution Provider will forward Applicant's request for modification to the CAISO, if applicable, within two (2) Business Days of receipt.

If no DGS Phase I Interconnection System Impact Study results meeting is held, Applicant shall submit to Distribution Provider any requested modifications within twenty-five thirty (2530) Business Calendar Days of the receipt of the final Phase I Interconnection System Impact Study report.

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**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)**

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**3. DETAILED STUDY INTERCONNECTION REVIEW PROCESS (Cont'd.)**

**db. Independent Distribution Group Study Process (Cont'd.)**

**vi) Modifications (Cont'd.)**

Modifications permitted under this Section F.3.db.v shall include specifically: (a) a decrease in the electrical output (MW) of the proposed Generating Facility; (b) modifying the technical parameters associated with the Generating Facility technology or the Generating Facility step-up transformer impedance characteristics; and (c) modifying the interconnection configuration. Distribution Provider, in coordination with CAISO, if applicable, will evaluate whether the proposed modification to the Interconnection Request constitutes a Material Modification. Distribution Provider will inform Applicant in writing whether the modifications would constitute a Material Modification within 10 Business Days of receipt of the proposed request for modification. Any change to the Point of Interconnection, except for that specified by Distribution Provider in an Interconnection Study or otherwise allowed under this Section F.3.db.v, shall constitute a Material Modification.

If the proposed modification is determined to be a Material Modification, Applicant may either withdraw the proposed modification or proceed with a new Interconnection Request for such modification. Applicant shall make such determination within ten (10) Business Days after being provided the Material Modification determination results.

Proposed modifications determined not to be Material Modifications may still necessitate the need to re-evaluate the System Impact-DGS Phase I Interconnection Study to determine modifications to the Interconnection Facilities and Distribution Upgrades. Such re-evaluation will occur during the DGS Phase II Interconnection Study Distribution Provider will provide Applicant an estimate of time to complete the re-evaluation and the associated incremental cost required to complete the re-evaluation. Applicant may either accept the

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**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)**

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**3. DETAILED STUDY INTERCONNECTION REVIEW PROCESS (Cont'd.)**

**db. Independent Distribution Group Study Process (Cont'd.)**

**v) Modifications (Cont'd.)**

~~additional time and cost to complete the re-evaluation, withdraw the proposed modification request, or proceed with a new Interconnection Request for such modification. Applicant shall make such determination within ten (10) Business Days after being provided the Material Modification results.~~

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**vii) Scope and Purpose of the Interconnection Facilities DGS Phase II Interconnection Study and Study Deposit.**

Within either (i) five (5) Business Days following the DGS Phase I Interconnection Study results meeting, or (ii) within ~~twenty five (25) Business~~ thirty (30) Calendar Days of the receipt of the final DGS Phase I Interconnection System Impact Study report if no DGS Phase I Interconnection System Impact Study results meeting is held, ~~whichever is earlier,~~ Applicant shall submit to Distribution Provider the data required by Distribution Provider. At that time, for Generating Facilities 5 MW or less, Applicant shall also submit the ~~Facilities Study~~ DGS Phase II Interconnection Study deposit, as set out in Section E.3.a, ~~unless the Facilities Study will be waived in accordance with Section F.3.d.vii. Facilities Study and move directly to a Generator Interconnection Agreement.~~ Applicant must agree in writing to be responsible for all actual costs of all required facilities deemed necessary by Distribution Provider. Applicant is responsible for all costs associated with Parallel Operation to support the safe and reliable operation of the Distribution and Transmission System as set forth in Section E.4. Refer to Section F.3.e for cost responsibility and time frames for completing the Generator Interconnection Agreement. ~~viii)~~

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**viii) DGS Phase II Interconnection Study Procedures**

**i) ~~vii) Waiver of the Interconnection Facilities Study~~**

~~The Facilities Study may be waived if Distribution Provider and Applicant mutually agree to such waiver. Within thirty (30) Calendar Days after Distribution Provider provides the final Interconnection System Impact Study report to Applicant (if the Interconnection Facilities Study is waived), Distribution Provider shall tender a draft Generator~~

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~~Interconnection Agreement, together with draft appendices. Refer to Section F.3.e for cost responsibility and time frames for completing the Generator Interconnection Agreement. If Applicant chooses to forgo the~~

Distribution Provider shall utilize existing studies to the extent practicable in conducting the DGS Phase II Interconnection Study.

The Distribution Provider shall use Reasonable Efforts to commence the DGS Phase II Interconnection Study within sixty (60) Calendar Days within sixty (60) Calendar Days of the of the issuance of the final DGS Phase I Interconnection Study report.

Distribution Provider shall use Reasonable Efforts to complete and distribute to Applicants the DGS Phase II Interconnection Study reports within sixty (60) Business Days after the commencement of each DGS Phase II Interconnection Study. The Distribution Provider will issue a final DGS Phase II Interconnection Study report to Applicant.

At the request of Applicant or at any time Distribution Provider determines that it will not meet the required time frame for completing the DGS Phase II Interconnection Study, Distribution Provider shall notify Applicant as to the schedule status of the DGS Phase II Interconnection Study and provide an estimated completion date. If the Distribution Provider is unable to complete the DGS Phase II Interconnection Study, such notice shall provide an explanation of the reasons why additional time is required.

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**GENERATING FACILITY INTERCONNECTIONS**

Sheet 74

**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)**

(N)

**3. DETAILED STUDY INTERCONNECTION REVIEW PROCESS (Cont'd.)**

**db. Independent Distribution Group Study Process (Cont'd.)**

**viii) ——— vii) Waiver of the Interconnection Facilities Study. (Cont'd.)**

viii) Facilities Study and move directly to a Generator Interconnection Agreement. Applicant must agree in writing to be responsible for all actual costs of all required facilities deemed necessary by Distribution Provider. Applicant is responsible for all costs associated with Parallel Operation to support the safe and reliable operation of the Distribution and Transmission System as set forth in Section E.4. Refer to Section F.3.e for cost responsibility and time frames for completing the Generator Interconnection Agreement. viii) DGS Phase II Interconnection Study Procedures (Cont'd.)

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Upon request of the Applicant, Distribution Provider shall provide Applicant all supporting documentation, work papers, and relevant pre-Interconnection Request and post-Interconnection Request power, short circuit and stability databases for the DGS Phase II Interconnection Study, subject to confidentiality arrangements consistent with Section D.7.

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The Distribution Provider will conduct a DGS Phase II Interconnection Study that will incorporate eligible Interconnection Requests from the previous DGS Phase I Interconnection Study. The DGS Phase II Interconnection Study shall (i) update, as necessary, analyses performed in the DGS Phase I Interconnection Study to account for the withdrawal of Interconnection Requests or other projects in the Interconnection Study Process, (ii) identify Distribution Upgrades needed to physically interconnect the Generating Facility, (iii) assign cost responsibility for the Distribution Upgrades, (iv) identify for each Interconnection Request a final Point of Interconnection and Distribution Provider's Interconnection Facilities, (v) provide an estimate for each Interconnection Request of the Distribution Provider's Interconnection Facilities, and (vi) optimize in-service timing requirements based on operational studies in order to maximize achievement of the Commercial Operation Dates of the Generating Facilities, as applicable.

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F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)

(N)

3. DETAILED STUDY INTERCONNECTION REVIEW PROCESS (Cont'd.)

I

db. Independent Distribution Group Study Process (Cont'd.)

(N)

ix) DGS Phase II Interconnection Study Results Meeting

If requested by an Applicant in a Distribution Study Group, a results meeting shall be held among Distribution Provider, the CAISO, if applicable, and the Applicant to discuss the results of the DGS Phase II Interconnection Study, including selection of the final Commercial Operation Date and assigned cost responsibility. Within five (5) Business Days of such request, Distribution Provider shall contact Applicant to establish a date agreeable to Applicant, Distribution Provider and the CAISO, if applicable, for the results meeting. If Applicant wants to have a meeting, it must be completed within thirty (30) Calendar Days of the final DGS Phase II Interconnection Study, unless mutually agreed upon by the Distribution Provider and Applicant.

x) Re-Evaluation of Distribution Upgrades Following DGS Phase II Interconnection Study

If an assessment following the issuance of the final DGS Phase II Interconnection Study is required to re-evaluate an Applicant's required Distribution Upgrades due to a project withdrawal, Distribution Provider shall so notify the Applicant in writing. Such re-evaluation shall take no longer than sixty (60) Calendar Days from the date of notice. Any cost of the re-evaluation shall be borne by the Applicant being re-evaluated.

ix) Timing of the DGS Phase II Interconnection Facilities Study.

Distribution Provider shall tender a draft Generator Interconnection Agreement pursuant to F.3.e.i. Refer to Section F.3.e for cost responsibility and time frames for completing the Generator Interconnection Agreement.

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REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)

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3. DETAILED STUDY INTERCONNECTION REVIEW PROCESS (Cont'd.)

db. Independent Distribution Group Study Process (Cont'd.)

ix) Timing of the DGS Phase II Interconnection Facilities Study (Cont'd.)

At any time Distribution Provider determines that it will not meet the required time frame for completing the Interconnection Facilities Study, Distribution Provider shall notify each Applicant in the Distribution Study Group in writing as to the status of the Interconnection Facilities Study and provide an estimated completion date with an explanation of the reasons why additional time is required.

ix) viii) Timing of the Interconnection Facilities Study. (Cont'd.)

Within thirty (30) Calendar Days after Second and Third Postings of Interconnection Financial Security

Each Applicant in a Distribution Study Group will post its second posting prior to 120 Calendar Days after publication of the final DGS Phase II Interconnection Study report, and third postings of Interconnection Financial Security on or before the start of construction activities, as set forth in Sections F.4.c and F.4.d based on the cost responsibility for Network Upgrades, Distribution Upgrades, and Distribution Provider's Interconnection Facilities set forth in the final DGS Phase II Interconnection Facilities Study, or the final Interconnection System Impact Study if the Interconnection Facilities Study is waived in accordance with Section F.3.d.vii.

xi) Withdrawal and Reallocation of Cost to Interconnection Requests in a Distribution Study Group

If at any time, an Interconnection Request is withdrawn or a Generator Interconnection Agreement is terminated, the upgrades identified in the Interconnection Studies will be revaluated to determine if they are still needed. If the Distribution Provider provides the final Interconnection Facilities Study report to Applicant, or determines that a restudy is needed, it will be conducted pursuant to Section F.3.b.xii. Any costs identified in the Distribution Group Study not already funded by

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Interconnection Financial Security that has been posted by the withdrawing Applicant, will be the responsibility of remaining Applicants in the Distribution Group and will be reallocated in accordance with E.4.e.

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~~db-Independent Distribution Group Study Process (Cont'd.)~~

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~~xi) Second and Third Postings of Interconnection Financial Security~~

~~Each Applicant in a Distribution Study Group will post its second and third postings of Interconnection Financial Security as set forth in Sections F.4.c and F.4.d based on the cost responsibility for Network Upgrades, Distribution Upgrades, and Distribution Provider's Interconnection Facilities set forth in the final DGS Phase II Interconnection Facilities Study, or the final Interconnection System Impact Study if the Interconnection Facilities Study is waived in accordance with Section F.3.d.vii.~~

xii) Withdrawal and Reallocation of Cost to Interconnection Requests in a Distribution Study Group

If at any time, an Interconnection Request is withdrawn or a Generator Interconnection Agreement is terminated, the upgrades identified in the Interconnection Studies will be reevaluated to determine if they are still needed. If the Distribution Provider determines that a restudy is needed, it will be conducted pursuant to Section F.3.b.xii. Any costs, identified in the Distribution Group Study not already funded by Interconnection Financial Security that has been posted by the withdrawing Applicant, will be the responsibility of remaining Applicants in the Distribution Group and will be reallocated in accordance with E.4.e.

xii) Restudy

The Restudy report shall be completed and provided to each Applicant remaining in the Distribution Group within sixty (60) Calendar Days of the withdrawal of the Interconnection Request that caused the Restudy. The Applicants remaining in the Distribution Group will be responsible for the cost of the restudy.

F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)

3. DETAILED STUDY INTERCONNECTION REVIEW PROCESS (Cont'd.)

b. Distribution Group Study Process (Cont'd.)

xiii) Automatic Timing Extension

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If during any six month period, the the number of Interconnection Requests exceeds by fifty (50) percent the number of active Interconnection Request in the preceding six month period, the study timelines for Distribution Group Studies begun during the next twelve (12) months will automatically increase as follows. The time to complete the DG Phase I Interconnection Study pursuant to Section F.3.b.ii will increase from sixty (60) Business Days to one hundred twenty (120) Business Days. The time to complete the DG Phase II Interconnection Study pursuant to Section F.3.b.viii will increase from sixty (60) Business Days to one hundred twenty (120) Calendar Days. The time to tender a draft Generator Interconnection Agreement pursuant to F.3.e.i will increase from thirty (30) Calendar Days to forty-five (45) Calendar Days and from forty-five (45) Calendar Days to sixty-seven (67) Calendar Days.

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F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)

3. DETAILED STUDY INTERCONNECTION REVIEW PROCESS (Cont'd.)

The Distribution Provider, in coordination with the CAISO, if

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applicable, shall determine whether the Interconnection Request is at or near the boundary of an Affected System(s) so as to potentially impact such Affected System(s). If a determination of potential impact is made, the Distribution Provider shall invite the Affected System Operator(s) to the Scoping Meeting by informing them of the time and place of the scheduled Scoping Meeting as soon as practicable.

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-or in the case of a Distribution Group Study the final DG Phase II Interconnection Study report to each Applicant in the Distribution Study Group or ii) the Interconnection Facilities Study results meeting, or in the case of a Distribution Group Study the DG Phase II Interconnection Study -but in no event later than forty-five (45) Calendar Days after Distribution Provider provides the final DG Phase II Interconnection Study report.

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**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)**

**3. DETAILED STUDY INTERCONNECTION REVIEW PROCESS (Cont'd.)**

**db. Independent Distribution Group Study Process (Cont'd.)**

**xii) Restudy**

The Restudy report shall be completed and provided to each Applicant remaining in the Distribution Study Group within thirty (30) ~~ninety-sixty (690)~~ Calendar Days of withdrawal of the Interconnection Facilities Study results meeting, if requested. Request that caused the Restudy. The Applicants remaining in the Distribution Study Provider shall Group will be responsible for the cost of the restudy.

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**xiii) Automatic Timing Extension**

If during any six month period, the the number of Interconnection Requests exceeds by fifty (50) percent the number of active Interconnection Request in the preceding six month period, the study timelines for Distribution Group Studies begun during the next twelve (12) months will automatically increase as follows. The time to complete the DG Phase I Interconnection Study pursuant to Section F.3.b.ii will increase from sixty (60) Business Days to one hundred twenty (120) Business Days. The time to complete the DG Phase II Interconnection Study pursuant to Section F.3.b.viii will increase from sixty (60) Business Days to one hundred twenty (120) Calendar Days. The time to tender a draft Generator Interconnection Agreement pursuant to F.3.e.i, together with draft appendices, unless Applicant requests an Interconnection Facilities Study results meeting. Refer to Section F.3.e for cost responsibility and time frames for completing the Generator Interconnection Agreement will increase from thirty (30) Calendar Days to forty-five (45) Calendar Days and from forty-five (45) Calendar Days to sixty-seven (67) Calendar Days.

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**c. Transmission Cluster Study Process**

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If Applicant's Interconnection Request fails Screen Q or elects to be studied under the Transmission Cluster Study Process, Applicant shall have the option of applying for Interconnection under the Transmission Cluster Study Process of the Wholesale Distribution Tariff in accordance with its provisions. If Applicant fails Screen Q, Applicant's Interconnection Request shall be deemed withdrawn under this Rule regardless of whether Applicant applies for Interconnection under the WDT.

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**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)**

**3. DETAILED STUDY INTERCONNECTION REVIEW PROCESS (Cont'd.)**

**c. Transmission Cluster Study Process**

An Applicant that chooses to apply under the Transmission Cluster Study Process of the WDT must file a valid Interconnection Request and post the applicable study deposit as set out in Distribution Provider's WDT. If Applicant chooses to apply under the WDT, then Applicant's Interconnection Request will be subject to the terms of Distribution Provider's WDT applicable to the Transmission Cluster Study Process, including those provisions establishing cost responsibility. Upon completion of the Transmission Cluster Study Process under the WDT, Applicants that are eligible for a State-jurisdictional Interconnection can, in accordance with the WDT, either execute the applicable Commission-approved Rule 21 Generator Interconnection Agreement for Exporting Generating Facilities or the WDT Generator Interconnection Agreement. Such Commission-approved Generator Interconnection Agreement for Exporting Generating Facilities will include the cost responsibility established in the Transmission Cluster Study.

If and when an Applicant submits a new interconnection request under the WDT, Applicant is under the jurisdiction of FERC. On the date the applicable Commission-approved Rule 21 Generator Interconnection Agreement for Exporting Generating Facilities is executed by Applicant, or Producer where those are different entities, and Distribution Provider, jurisdiction over the Interconnection reverts back to the Commission.

**d. Independent Study Process**

**i) Scoping Meeting**

Within five (5) Business Days after Distribution Provider notifies Applicant that the Interconnection Request has passed Screens Q and R and is thus eligible for the Independent Study Process, Distribution Provider shall contact Applicant to establish a date agreeable to Applicant and Distribution Provider for a scoping meeting.

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**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)**  
~~**REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)**~~

**3. DETAILED STUDY INTERCONNECTION REVIEW PROCESS (Cont'd.)**

**d. Independent Study Process (Cont'd.)**

**i) Scoping Meeting (Cont'd.)**

The purpose of the scoping meeting shall be: (i) to discuss reasonable Commercial Operation Dates and alternative interconnection options; (ii) to exchange information, including any transmission data that would reasonably be expected to impact Applicant's interconnection options; (iii) to analyze such information; and (iv) to determine feasible Points of Interconnection and eliminate alternatives given resources and available information.

Distribution Provider will bring to the scoping meeting, as reasonably necessary to accomplish its purpose, such already available technical data, including, but not limited to; (i) general facility loadings, (ii) general instability issues, (iii) general short circuit issues, (iv) general voltage issues, and (v) general reliability issues.

Applicant will bring to the scoping meeting, in addition to the technical data in Attachment A of the Rule 21 Exporting Generating Facility Interconnection Request form, any system studies previously performed. Distribution Provider, the CAISO, if applicable, and Applicant will also bring to the meeting personnel and other resources as may be reasonably required to accomplish the purpose of the meeting in the time allocated for the meeting. On the basis of the meeting, Applicant shall designate its Point of Interconnection. The duration of the meeting shall be only what is sufficient to accomplish its purpose.

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F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)

3. DETAILED STUDY INTERCONNECTION REVIEW PROCESS (Cont'd.)

d. Independent Study Process (Cont'd.)

i) Scoping Meeting (Cont'd.)

Within fifteen (15) Business Days after the scoping meeting, Distribution Provider shall provide Applicant with an Detailed Study Agreement with provisions for an Independent Study Process Study Agreement, which shall contain an outline of the scope of the Interconnection System Impact Study and Interconnection Facilities Study, contain a non-binding good faith estimate of the cost to perform such studies, and shall specify that Applicant is responsible for the actual cost of the Interconnection Studies, including reasonable administrative costs.

~~F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)~~

~~3. DETAILED STUDY INTERCONNECTION REVIEW PROCESS (Cont'd.)~~

~~d. Independent Study Process (Cont'd.)~~

~~i) Scoping Meeting (Cont'd.)~~

Applicant shall execute and deliver to Distribution Provider the Independent Study Process Study Agreement no later than thirty (30) Business Days after the scoping meeting, or the Interconnection Request shall be deemed withdrawn.

ii) Timing of the Interconnection System Impact Study Results.

Absent extraordinary circumstances, Distribution Provider shall complete and issue a final Interconnection System Impact Study report within sixty (60) Business Days after the execution of an Independent Study Process Study Agreement. If the System Impact Study indicates a need for Network Upgrades, Distribution Provider will share applicable study results with the CAISO for review and comment and will incorporate comments into the final Interconnection System Impact Study report.

At any time Distribution Provider determines that it will not meet the required time frame for completing the Interconnection System Impact Study, Distribution Provider shall notify Applicant

(Continued)

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in writing as to the status of the Interconnection System Impact Study and provide an estimated completion date with an explanation of the reasons why additional time is required.

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F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)

3. DETAILED STUDY INTERCONNECTION REVIEW PROCESS (Cont'd.)

d. Independent Study Process (Cont'd.)

ii) Scoping Meeting (Cont'd.)

Upon request, Distribution Provider shall provide Applicant all relevant supporting documentation, workpapers and pre-Interconnection Request and post-Interconnection Request power flow, short circuit and stability databases, and currently planned Distribution Upgrades relevant to the Interconnection Request for the Interconnection System Impact Study. Applicant may be required to sign a non-disclosure agreement with terms consistent with Section D.7 regarding Confidentiality.

iii) Interconnection System Impact Study Results Meeting

~~F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)~~

~~3. DETAILED STUDY INTERCONNECTION REVIEW PROCESS (Cont'd.)~~

~~d. Independent Study Process (Cont'd.)~~

~~iii) Interconnection System Impact Study Results Meeting~~

If requested by ~~an~~ Applicant, a results meeting shall be held among Distribution Provider, the CAISO, if applicable, and Applicant to discuss the results of the Interconnection ~~Facilities System Impact~~ Study, including assigned cost responsibility. Within five (5) Business Days of ~~thesuch~~ request, Distribution Provider shall contact Applicant to establish a date agreeable to Applicant, Distribution Provider and the CAISO, if applicable, for the results meeting.

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iv) Initial Posting of Interconnection Financial Security.

Applicant shall make its initial posting of Interconnection Financial Security in accordance with the requirements of Section F.4.b, within sixty (60) Calendar Days after being provided with the final Interconnection System Impact Study report, or its Interconnection Request shall be deemed withdrawn. The initial posting of Interconnection Financial Security will be based on the cost responsibility for Network Upgrades, Distribution Upgrades, and Distribution Provider's Interconnection Facilities set forth in the final Interconnection System Impact Study report.

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- F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)
3. DETAILED STUDY INTERCONNECTION REVIEW PROCESS (Cont'd.)
- d. Independent Study Process (Cont'd.)
- v) Modifications

At any time during the course of the Interconnection Studies, Applicant, Distribution Provider, or the CAISO, as applicable, may identify changes to the planned Interconnection that may improve the costs and benefits (including reliability) of the Interconnection, and the ability of the proposed change to accommodate the Interconnection Request. To the extent the identified changes are acceptable to Distribution Provider, the CAISO, as applicable, and Applicant, such acceptance not to be unreasonably withheld, Distribution Provider shall modify the Point of Interconnection and/or configuration in accordance with such changes without altering the Interconnection Request's eligibility for participating in Interconnection Studies.

At the Interconnection System Impact Study results meeting, Applicant should be prepared to discuss any desired modifications to the Interconnection Request. After the publication of the final Interconnection System Impact Study report, but no later than five (5) Business Days following the Interconnection System Impact Study results meeting, Applicant shall submit to Distribution Provider, in writing, modifications to any information provided in the Interconnection Request. Distribution Provider will forward Applicant's request for modification to the CAISO, if applicable, within two (2) Business Days of receipt. If no Interconnection System Impact Study results meeting is held, Applicant shall submit to Distribution Provider any requested modifications within twenty-five (25) Business Days of the receipt of the final Interconnection System Impact Study report.

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- F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)
3. DETAILED STUDY INTERCONNECTION REVIEW PROCESS (Cont'd.)
- d. Independent Study Process (Cont'd.)
- v) Modifications (Cont'd)

Modifications permitted under this Section F.3.d.v shall include specifically: (a) a decrease in the electrical output (MW) of the proposed Generating Facility; (b) modifying the technical parameters associated with the Generating Facility technology or the Generating Facility step-up transformer impedance characteristics; and (c) modifying the interconnection configuration. Distribution Provider, in coordination with CAISO, if applicable, will evaluate whether the proposed modification to the Interconnection Request constitutes a Material Modification. Distribution Provider will inform Applicant in writing whether the modifications would constitute a Material Modification within 10 Business Days of receipt of the proposed request for modification. Any change to the Point of Interconnection, except for that specified by Distribution Provider in an Interconnection Study or otherwise allowed under this Section F.3.d.v, shall constitute a Material Modification.

If the proposed modification is determined to be a Material Modification, Applicant may either withdraw the proposed modification or proceed with a new Interconnection Request for such modification. Applicant shall make such determination within ten (10) Business Days after being provided the Material Modification determination results.

Proposed modifications determined not to be Material Modifications may still necessitate the need to re-evaluate the System Impact Study to determine modifications to the Interconnection Facilities and Distribution Upgrades. Distribution Provider will provide Applicant an estimate of time to complete the re-evaluation and the associated incremental cost required to complete the re-evaluation. Applicant may either accept the additional time and cost to complete the re-evaluation, withdraw the proposed modification request, or proceed with a new Interconnection Request for such modification. Applicant shall make such determination within ten (10) Business Days after being provided the Material Modification results.

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**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)**

**3. DETAILED STUDY INTERCONNECTION REVIEW PROCESS (Cont'd.)**

**d. Independent Study Process (Cont'd.)**

**vi) Scope and Purpose of the Interconnection Facilities Study and Study Deposit.**

Within either (i) five (5) Business Days following the results meeting, or (ii) within twenty-five (25) Business Days of the receipt of the final Interconnection System Impact Study report if no Interconnection System Impact Study results meeting is held, Applicant shall submit to Distribution Provider the data required by Distribution Provider. At that time, for Generating Facilities 5 MW or less, Applicant shall also submit the Facilities Study deposit, as set out in Section E.3.a, unless the Facilities Study will be waived in accordance with Section F.3.d.vii.

**vii) Waiver of the Interconnection Facilities Study**

The Facilities Study may be waived if Distribution Provider and Applicant mutually agree to such waiver. Within thirty (30) Calendar Days after Distribution Provider provides the final Interconnection System Impact Study report to Applicant (if the Interconnection Facilities Study results meeting, Distribution Provider shall tender a draft Generator Interconnection Agreement, together with draft appendices, to Applicant. Refer to Section F.3.e for cost responsibility and time frames for completing the Generator Interconnection Agreement. If Applicant chooses to forgo the Facilities Study and move directly to a Generator Interconnection Agreement, Applicant must agree in writing to be responsible for all actual costs of all required facilities deemed necessary by Distribution Provider. Applicant is responsible for all costs associated with Parallel Operation to support the safe and reliable operation of the Distribution and Transmission System as set forth in Section E.4. Refer to Section F.3.e for cost responsibility and time frames for completing the Generator Interconnection Agreement.

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- F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)
3. DETAILED STUDY INTERCONNECTION REVIEW PROCESS (Cont'd.)
- d. Independent Study Process (Cont'd.)

viii) Timing of the Interconnection Facilities Study.

The Interconnection Facilities Study shall be completed and provided to Applicant within sixty (60) Business Days after Applicant posts the initial Interconnection Financial Security in accordance with Section F.4.b where Distribution Upgrades or Network Upgrades are identified and, for Generating Facilities with a Gross Nameplate Rating of 5 MW or less, Applicant submits the Facilities Study deposit in accordance with Section E.3.a and F.3.d.vi. In cases where no Distribution Upgrades and/or Network Upgrades are identified and the required facilities are limited to Distribution Provider's Interconnection Facilities only, the Interconnection Facilities Study shall be completed within forty-five (45) Business Days after Applicant posts the initial Interconnection Financial Security and, for Generating Facilities with a Gross Nameplate Rating of 5 MW or less, Applicant submits the Facilities Study deposit.

If applicable, Distribution Provider will share the applicable study results with the CAISO for review and comment, and will incorporate CAISO comments, if any, into the study report prior to issuing a final Interconnection Facilities Study report to Applicant.

Within thirty (30) Calendar Days after Distribution Provider provides the final Interconnection Facilities Study report to Applicant, or within thirty (30) Calendar Days of an Interconnection Facilities Study results meeting, if requested, Distribution Provider shall tender a draft Generator Interconnection Agreement, together with draft appendices, unless Applicant requests an Interconnection Facilities Study results meeting. Refer to Section F.3.e for cost responsibility and time frames for completing the Generator Interconnection Agreement.

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F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)

3. DETAILED STUDY INTERCONNECTION REVIEW PROCESS (Cont'd.)

d. Independent Study Process (Cont'd.)

viii) Timing of the Interconnection Facilities Study.

At any time Distribution Provider determines that it will not meet the required time frame for completing the Interconnection Facilities Study, Distribution Provider shall notify Applicant in writing as to the status of the Interconnection Facilities Study and provide an estimated completion date with an explanation of the reasons why additional time is required.

ix) Interconnection Facilities Study Results Meeting.

If requested by Applicant, a results meeting shall be held among Distribution Provider, the CAISO, if applicable, and Applicant to discuss the results of the Interconnection Facilities Study, including assigned cost responsibility. Within five (5) Business Days of the request, Distribution Provider shall contact Applicant to establish a date agreeable to Applicant, Distribution Provider and the CAISO, if applicable, for the results meeting.

Within thirty (30) Calendar Days after the Interconnection Facilities Study results meeting, Distribution Provider shall tender a draft Generator Interconnection Agreement, together with draft appendices, to Applicant. Refer to Section F.3.e for cost responsibility and time frames for completing the Generator Interconnection Agreement.

x) Second and Third Postings of Interconnection Financial Security

Applicant will post its second and third postings of Interconnection Financial Security as set forth in Sections F.4.c and F.4.d based on the cost responsibility for Network Upgrades, Distribution Upgrades, and Distribution Provider's Interconnection Facilities set forth in the final Interconnection Facilities Study, or the final Interconnection System Impact Study if the Interconnection Facilities Study is waived in accordance with Section F.3.d.vii.

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F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)

3. DETAILED STUDY INTERCONNECTION REVIEW PROCESS (Cont'd.)

e. Generator Interconnection Agreement

i) Tender

The Distribution Provider shall tender a draft Generator Interconnection Agreement, together with draft appendices, within thirty (30) Calendar Days of the following:

i) Provision of the final Interconnection Facilities Study report (or results meeting, if held) to Applicant,

ii) Provision of the final Interconnection System Impact Study report (or results meeting, if held) to Applicant,

iii) Provision of the final DGS Phase II Interconnection Study report to each Applicant in the Distribution Study Group (or results meeting, if held).

Applicant(s) shall provide written comments, or notification of no comments, to the draft appendices within thirty (30) Calendar Days.

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**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)**

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**7 3. DETAILED STUDY INTERCONNECTION REVIEW PROCESS (Cont'd.)**

**e. Generator Interconnection Agreement (Cont'd.)**

**ii) Negotiation**

Notwithstanding Section F.3.e.i, at the request of Applicant, Distribution Provider shall begin negotiations with Applicant concerning the appendices to the Generator Interconnection Agreement at any time after Distribution Provider provides Applicant with the final Interconnection Facilities Study report (or final Interconnection System Impact Study report if the Interconnection Facilities Study is waived) or final DGS Phase II Interconnection Study report in the case of the Distribution Group Study Process. Distribution Provider and Applicant shall negotiate concerning any disputed provisions of the appendices to the draft Generator Interconnection Agreement for not more than ninety (90) Calendar Days after Distribution Provider provides Applicant with the final DGS Phase II Interconnection Study report in the case of the Distribution Group Study Process or the final Interconnection Facilities Study report (or final Interconnection System Impact Study report if the Interconnection Facilities Study is waived) in the case of the Independent Study Process. Producers whose Interconnection Request were studied in a Distribution Group Study Process will be required to fund upgrades triggered by more than one Interconnection Request in accordance with a payment schedule that allows such upgrades to be completed in time for the earliest COD of such Interconnection requests. Producer is responsible for all costs associated with Parallel Operation to support the safe and reliable operation of the Distribution System and Transmission System as set forth in Section E.4.

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- F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)
3. DETAILED STUDY INTERCONNECTION REVIEW PROCESS (Cont'd.)
- e. Generator Interconnection Agreement (Cont'd.)
- ii) Negotiation (Cont'd.)

—If Applicant determines that negotiations are at an impasse, it may request termination of the negotiations at any time after tender of the draft Generator Interconnection Agreement pursuant to Section F.3.e.i and initiate Dispute Resolution procedures pursuant to Section K. Unless otherwise agreed by the Parties, if Applicant or Producer, where those are different entities, has not executed the Generator Interconnection Agreement, or initiated Dispute Resolution procedures pursuant to Section K, within ninety (90) Calendar Days after issuance of the final DGS Phase II Interconnection Study report in the case of the Distribution Group Study Process or Interconnection Facilities Study report (or final Interconnection System Impact Study report if the Interconnection Facilities Study is waived) in the case of the Independent Study Process, it shall be deemed to have withdrawn its Interconnection Request. Distribution Provider shall provide to Producer a final Generator Interconnection Agreement within fifteen (15) Business Days after the completion of the negotiation process.

- iii) Extensions of Commercial Operation Date.

~~Extensions of t~~The Commercial Operation Date will be agreed upon in the executed Generator Interconnection Agreement. Reasonable Commercial Operation Dates will be discussed at the Interconnection Facilities Study results meeting or the System Impact Study results meeting if the Facilities Study is waived. ~~Interconnection Requests under the Independent Study Process will not be granted extensions except in circumstances beyond the control of Producer. A request for an extension of Commercial Operation date after the Generator Interconnection Agreement is executed will be agreed to provided that, the producer is still responsible for funding ant Distribution Upgrades and Network Upgrades as specified in the Generator Interconnection Agreement and under the same payment schedule agreed upon in the Generator Interconnection Agreement.~~ This provision has no impact on any power purchase agreement terms.

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F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)

(N)

3. DETAILED STUDY INTERCONNECTION REVIEW PROCESS (Cont'd.)

f. Engineering & Procurement (E&P) Agreement

Prior to executing a Generator Interconnection Agreement, in order to advance the implementation of its interconnection, an Applicant may request, and Distribution Provider shall offer, an E&P Agreement that authorizes Distribution Provider to begin engineering and procurement of long lead-time items necessary for the establishment of the interconnection. However, Distribution Provider shall not be obligated to offer an E&P Agreement if Applicant is in Dispute Resolution as a result of an allegation that Applicant has failed to meet any milestones or comply with any prerequisites specified in other parts of this Rule. The E&P Agreement is an optional procedure. The E&P Agreement shall provide for Applicant to pay the cost of all activities authorized by Applicant and to make advance payments or provide other satisfactory security for such costs.

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**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)**

(N)

**3. DETAILED STUDY INTERCONNECTION REVIEW PROCESS (Cont'd.)**

**f. Engineering & Procurement (E&P) Agreement (Cont'd.)**

Applicant shall pay the cost of such authorized activities and any cancellation costs for equipment that is already ordered for its interconnection, which cannot be mitigated as hereafter described, whether or not such items or equipment later become unnecessary. If Applicant withdraws its Interconnection Request, or either Applicant or Distribution Provider terminates the E&P Agreement, to the extent the equipment ordered can be canceled under reasonable terms, Applicant shall be obligated to pay the associated cancellation costs. To the extent that the equipment cannot be reasonably canceled, Distribution Provider may elect: (i) to take title to the equipment, in which event Distribution Provider shall refund Applicant any amounts paid by Applicant for such equipment and shall pay the cost of delivery of such equipment, or (ii) to transfer title to and deliver such equipment to Applicant, in which event Applicant shall pay any unpaid balance and cost of delivery of such equipment.

**4. INTERCONNECTION FINANCIAL SECURITY**

**a. Types of Interconnection Financial Security.**

The Interconnection Financial Security posted by an Applicant may be any combination of the following types of Interconnection Financial Security provided in favor of Distribution Provider:

- (a) an irrevocable and unconditional letter of credit issued by a bank or financial institution that has a credit rating of A or better by Standard and Poor's or A2 or better by Moody's;
- (b) an unconditional and irrevocable guaranty issued by a company that has a credit rating of A or better by Standard and Poor's or A2 or better by Moody's;
- (c) a cash deposit standing to the credit of Distribution Provider and in an interest-bearing escrow account maintained at a bank or financial institution that is reasonably acceptable to Distribution Provider;

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**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)**

(N)

**4. INTERCONNECTION FINANCIAL SECURITY (Cont'd.)**

**a. Types of Interconnection Financial Security (Cont'd.)**

Interconnection Financial Security instruments as listed above shall be in such form as Distribution Provider may reasonably require from time to time by notice to Applicants, or in such other form as has been evaluated and approved as reasonably acceptable by Distribution Provider.

Distribution Provider shall require the use of standardized forms of Interconnection Financial Security to the greatest extent possible. If at any time the guarantor of the Interconnection Financial Security fails to maintain the credit rating required by this Section F.4.a, Applicant shall provide to Distribution Provider replacement Interconnection Financial Security meeting the requirements of this Section F.4.a within five (5) Business Days of the change in credit rating.

Interest on a cash deposit standing to the credit of Distribution Provider in an interest-bearing escrow account under subpart (d) of this Section F.4.a will accrue to Applicant's benefit.

**b. Initial Posting of Interconnection Financial Security**

On or before sixty (60) Calendar Days after publication of the final Interconnection System Impact Study report, Applicant must post, with notice to Distribution Provider, two separate Interconnection Financial Security instruments.

First, Applicant proposing to interconnect a Large Generating Facility shall post an Interconnection Financial Security instrument in an amount equal to the lesser of (i) fifteen percent (15%) of the total cost responsibility assigned to Applicant in the final Interconnection System Impact Study or final DGS Phase I Interconnection Study in the case of the Distribution Group Study Process for Network Upgrades, (ii) \$20,000 per MW of electrical output of the Large Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by Applicant in its Interconnection Request, including any requested modifications thereto, or (iii) \$7,500,000.

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**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)**

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**4. INTERCONNECTION FINANCIAL SECURITY (Cont'd.)**

**b. Initial Posting of Interconnection Financial Security (Cont'd.)**

Applicant proposing to interconnect a Small Generating Facility shall post an Interconnection Financial Security instrument in an amount equal to the lesser of (i) fifteen percent (15%) of the total cost responsibility assigned to Applicant in the final Interconnection System Impact Study or final DGS Phase I Interconnection Study in the case of the Distribution Group Study Process for Network Upgrades, or (ii) \$20,000 per MW of electrical output of the Small Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by Applicant in its Interconnection Request.

Second, Applicant shall also post an Interconnection Financial Security instrument in the amount of twenty percent (20%) of the total estimated cost responsibility assigned to Applicant in the final Interconnection System Impact Study DGS Phase I Interconnection Study in the case of the Distribution Group Study Process for Distribution Provider's Interconnection Facilities and Distribution Upgrades.

The failure by an Applicant to timely post the Interconnection Financial Security required by this Section F.4.b shall result in the Interconnection Request being deemed withdrawn subject to Section F.6.

Applicant shall provide Distribution Provider with written notice that it has posted the required Interconnection Financial Security no later than the applicable final day for posting.

Applicant shall provide Distribution Provider with written notice that it has posted the required Interconnection Financial Security no later than the applicable final day for posting.

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Advice Letter No: 4110-E  
Decision No. 12-09-018

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Regulatory Relations

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31950-E

**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 94

**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)**

(N)

**4. INTERCONNECTION FINANCIAL SECURITY (Cont'd.)**

**c. Second Posting of Interconnection Financial Security**

On or before one hundred twenty (120) Calendar Days after publication of the final DGS Phase II Interconnection Study report or final Interconnection Facilities Study report (or final Interconnection System Impact Study report if the Interconnection Facilities Study is waived in the case of the Independent Study Process), Applicant shall post two separate Interconnection Financial Security instruments.

First, Applicant proposing to interconnect a Large Generating Facility shall post an Interconnection Financial Security instrument such that the total Interconnection Financial Security posted by Applicant for Network Upgrades equals the lesser of (i) \$15 million, or (ii) thirty percent (30%) of the total cost responsibility assigned to Applicant for Network Upgrades in either the final Interconnection System Impact Study (final DGS Phase I Interconnection Study in the case on the Distribution Group Study Process) or final Interconnection Facilities Study (final DGS Phase II Interconnection Study in the case of the Distribution Group Study Process), whichever is lower.

Applicant proposing to interconnect a Small Generating Facility shall post an Interconnection Financial Security instrument such that the total Interconnection Financial Security posted by Applicant for Network Upgrades equals the lesser of (i) \$1 million, or (ii) thirty percent (30%) of the total cost responsibility assigned to Applicant for Network Upgrades in either the final Interconnection System Impact Study or final Interconnection Facilities Study, (final DGS Phase I or final DGS Phase II Interconnection Studies, respectively, for the Distribution Group Study Process) whichever is lower.

Second, Applicant shall also post an Interconnection Financial Security instrument such that the total Interconnection Financial Security posted by Applicant for Distribution Provider's Interconnection Facilities and Distribution Upgrades equals thirty percent (30%) of the total cost responsibility assigned to Applicant in the final DGS Phase II Interconnection Study or final Interconnection Facilities Study, or final Interconnection System Impact Study in the case of the Independent Study Process if the Interconnection Facilities Study is waived, for Distribution Provider's Interconnection Facilities and Distribution Upgrades.

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**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

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**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)**

(N)

**4. INTERCONNECTION FINANCIAL SECURITY (Cont'd.)**

**c. Second Posting of Interconnection Financial Security (Cont'd.)**

If the start date for Construction Activities of Network Upgrades, Distribution Provider's Interconnection Facilities and Distribution Upgrades on behalf of Applicant is prior to one hundred twenty (120) Calendar Days after publication of the final DGS Phase II Interconnection Study report or final Interconnection Facilities Study report (or final Interconnection System Impact Study report in the case of the Independent Study Process if the Interconnection Facilities Study is waived), that start date must be set forth in Applicant's Generator Interconnection Agreement and Applicant shall make its second posting of Interconnection Financial Security pursuant to Section F.4.d rather than Section F.4.c.

The failure by an Applicant to timely post the Interconnection Financial Security required by this Section F.4.c shall result in the Interconnection Request being deemed withdrawn and subject to Section F.6 or, if applicable, shall constitute grounds for termination of the Generator Interconnection Agreement.

**d. Third Posting of Interconnection Financial Security.**

On or before the start of Construction Activities for Network Upgrades or Distribution Provider's Interconnection Facilities or Distribution Upgrades on behalf of Applicant, whichever is earlier, Applicant shall modify the two separate Interconnection Financial Security instruments posted as follows.

With respect to the Interconnection Financial Security instrument for Network Upgrades, Applicant shall modify this instrument so that it equals one hundred percent (100%) of the total cost responsibility assigned to Applicant for Network Upgrades in the final DGS Phase II Interconnection Study or final Interconnection Facilities Study, or the final Interconnection System Impact Study in the case of the Independent Study Process if the Interconnection Facilities Study is waived.

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**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 96

**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)**

(N)

**3 4. INTERCONNECTION FINANCIAL SECURITY (Cont'd.)**

**d. Third Posting of Interconnection Financial Security (Cont'd.)**

With respect to the Interconnection Financial Security instrument for Distribution Provider's Interconnection Facilities or Distribution Upgrades, Applicant shall modify this instrument so that it equals one hundred percent (100%) of the total cost responsibility assigned to Applicant for Distribution Provider's Interconnection Facilities in the final DGS Phase II Interconnection Study or final Interconnection Facilities Study, or the final Interconnection System Impact Study in the case of the Independent System Process if the Interconnection Facilities Study is waived.

The failure by an Applicant to timely post the Interconnection Financial Security required by this Section F.4.d shall constitute grounds for termination of the Generator Interconnection Agreement.

**e. General Effect of Withdrawal of Interconnection Request or Termination of the Generator Interconnection Agreement on Interconnection Financial Security for Projects Studied Under the Independent Study Process.**

Except as set forth in Section F.4.e.i, withdrawal of an Interconnection Request or termination of a Generator Interconnection Agreement shall allow Distribution Provider to liquidate the Interconnection Financial Security, or balance thereof, posted by Applicant for Network Upgrades at the time of withdrawal. To the extent the amount of the liquidated Interconnection Financial Security plus capital, if any, separately provided by Applicant to satisfy its obligation to finance Network Upgrades in accordance with Section E.4 exceeds the total cost responsibility for Network Upgrades assigned to Applicant by the final Interconnection Facilities Study, or the final Interconnection System Impact Study if the Interconnection Facilities Study is waived, Distribution Provider shall remit to Applicant the excess amount.

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**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

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**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)**

(N)

**4. INTERCONNECTION FINANCIAL SECURITY (Cont'd.)**

- e. General Effect of Withdrawal of Interconnection Request or Termination of the Generator Interconnection Agreement on Interconnection Financial Security for Projects Studied Under the Independent Study Process. (Cont'd.)

Withdrawal of an Interconnection Request or termination of a Generator Interconnection Agreement shall result in the release to Applicant of any Interconnection Financial Security posted by Applicant for Distribution Provider's Interconnection Facilities and Distribution Upgrades, except with respect to any amounts necessary to pay for costs incurred or irrevocably committed by Distribution Provider on behalf of Applicant for Distribution Provider's Interconnection Facilities and Distribution Upgrades and for which Distribution Provider has not been reimbursed.

- i) Conditions for Partial Recovery of Interconnection Financial Security Upon Withdrawal of Interconnection Request or Termination of Generator Interconnection Agreement.

A portion of the Interconnection Financial Security shall be released to Applicant, consistent with Section F.4.e.ii, if the withdrawal of the Interconnection Request or termination of the Generator Interconnection Agreement occurs for any of the following reasons:

- (1) Failure to Secure a Power Purchase Agreement.

At the time of withdrawal of the Interconnection Request or termination of the Generator Interconnection Agreement, Applicant demonstrates to Distribution Provider that it has failed to secure an acceptable power purchase agreement for the energy or capacity of the Generating Facility after a good faith effort to do so. A good faith effort can be established by demonstrating participation in a competitive solicitation process or bilateral negotiations with an entity other than an Affiliate that progressed, at minimum, to the mutual exchange by all counter-parties of proposed term sheets.

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**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

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**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)**

(N)

**4. INTERCONNECTION FINANCIAL SECURITY (Cont'd.)**

e. General Effect of Withdrawal of Interconnection Request or Termination of the Generator Interconnection Agreement on Interconnection Financial Security for Projects Studied Under the Independent Study Process. (Cont'd.)

i) Conditions for Partial Recovery of Interconnection Financial Security Upon Withdrawal of Interconnection Request or Termination of Generator Interconnection Agreement. (Cont'd.)

(2) Failure to Secure a Necessary Permit.

At the time of withdrawal of the Interconnection Request or termination of the Generator Interconnection Agreement, Applicant demonstrates to Distribution Provider that it has received a final denial from the primary issuing Governmental Authority of any permit or other authorization necessary for the construction or operation of the Generating Facility.

(3) Increase in the Cost of Distribution Provider's Interconnection Facilities or Distribution Upgrades.

Applicant withdraws the Interconnection Request or terminates the Generator Interconnection Agreement based on an increase of: (i) more than 30% or \$300,000, whichever is greater, in the estimated cost of Distribution Provider's Interconnection Facilities; or (ii) more than 30% or \$300,000, whichever is greater, in the estimated cost of Distribution Upgrades allocated to Applicant from the Interconnection System Impact Study to the Interconnection Facilities Study. This Section F.4.e.i.(3) shall not apply if the cause of the cost increase under (i) or (ii) above is the result of a change requested by Applicant pursuant to Section F.3.d.v.

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**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 99

**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)**

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**4. INTERCONNECTION FINANCIAL SECURITY (Cont'd.)**

e. General Effect of Withdrawal of Interconnection Request or Termination of the Generator Interconnection Agreement on Interconnection Financial Security. (Cont'd.)

i) Conditions for Partial Recovery of Interconnection Financial Security Upon Withdrawal of Interconnection Request or Termination of Generator Interconnection Agreement. (Cont'd.)

(4) Material Change in Applicant's Interconnection Facilities Created by Distribution Provider's Change in the Point of Interconnection.

Applicant withdraws the Interconnection Request or terminates the Generator Interconnection Agreement based on a material change from the Interconnection System Impact Study in the Point of Interconnection for the Generating Facility mandated by Distribution Provider and included in the final Interconnection Facilities Study. A material change in the Point of Interconnection shall be where the Point of Interconnection has moved to (i) a different substation, (ii) a different line on a different right of way, or (iii) a materially different location than previously identified on the same line.

ii) Schedule for Determining Non-Refundable Portion of the Interconnection Financial Security for Network Upgrades.

(1) Up to One Hundred Twenty (120) Calendar Days ~~After~~ after the ~~Final~~ Final Interconnection Facilities Study ~~Report~~ report (or ~~Final~~ Final Interconnection System Impact Study ~~Report~~ report if the Interconnection Facilities Study is Waived).

If, at any time after the initial posting of the Interconnection Financial Security for Network Upgrades under Section F.4.b and on or before one hundred twenty (120) Calendar Days

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**GENERATING FACILITY INTERCONNECTIONS**

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**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)**

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**4. INTERCONNECTION FINANCIAL SECURITY (Cont'd.)**

- e. General Effect of Withdrawal of Interconnection Request or Termination of the Generator Interconnection Agreement on Interconnection Financial Security. (Cont'd.)
- ii) Schedule for Determining Non-Refundable Portion of the Interconnection Financial Security for Network Upgrades (Cont'd.)
  - (1) Up to One Hundred Twenty (120) Calendar Days After the Final Interconnection Facilities Study Report (or Final Interconnection System Impact Study Report if the Interconnection Facilities Study is Waived). (Cont'd.)

after the date of issuance of the final Interconnection Facilities Study report (or final Interconnection System Impact Study report if the Interconnection Facilities Study is waived), Applicant withdraws the Interconnection Request or terminates the Generator Interconnection Agreement, as applicable, in accordance with Section F.4.e.i, Distribution Provider shall liquidate the Interconnection Financial Security for Network Upgrades under Section F.4.b and reimburse Applicant in an amount of (i) any posted amount less fifty percent (50%) of the value of the posted Interconnection Financial Security for Network Upgrades (with a maximum of \$10,000 per requested and approved MW value of the Generating Facility Capacity at the time of withdrawal being retained by Distribution Provider), or (ii) if the Interconnection Financial Security has been drawn down to finance Pre-Construction Activities for Network Upgrades on behalf of Applicant, the lesser of the remaining balance of the Interconnection Financial Security or the amount calculated under (i) above. If Applicant has separately provided capital apart from the Interconnection Financial Security to finance Pre-Construction Activities for Network Upgrades, Distribution Provider will credit the capital provided as if drawn from the Interconnection Financial Security and apply (ii) above.

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**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 101

**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)**

(N)

**3 4. INTERCONNECTION FINANCIAL SECURITY (Cont'd.)**

e. General Effect of Withdrawal of Interconnection Request or Termination of the Generator Interconnection Agreement on Interconnection Financial Security. (Cont'd.)

ii) Schedule for Determining Non-Refundable Portion of the Interconnection Financial Security for Network Upgrades. (Cont'd.)

(2) Between One Hundred Twenty-One (121) Calendar Days and After Final Interconnection Facilities Study Report and the Commencement of Construction Activities.

If, at any time between one hundred twenty-one (121) Calendar Days and after the date of issuance of the final Interconnection Facilities Study report (or final Interconnection System Impact Study report if the Interconnection Facilities Study is waived), and the commencement of Construction Activities for either Network Upgrades or Distribution Provider's Interconnection Facilities or Distribution Upgrades, Applicant withdraws the Interconnection Request or terminates the Generator Interconnection Agreement, as applicable, in accordance with Section F.4.e.i, Distribution Provider shall liquidate the Interconnection Financial Security for Network Upgrades under Section F.4.c and reimburse Applicant in an amount of (i) any posted amounts less fifty percent (50%) of the value of the posted Interconnection Financial Security for Network Upgrades (with a maximum of \$20,000 per requested and approved MW value of the Generating Facility Capacity at the time of withdrawal being retained by Distribution Provider), or, (ii) if the Interconnection Financial Security has been drawn down to finance Pre-Construction Activities for Network Upgrades on behalf of Applicant, the lesser of the remaining balance of the Interconnection Financial Security or the amount calculated under (i) above. If Applicant has separately provided capital apart from the Interconnection Financial Security to finance Pre-Construction Activities for Network Upgrades, Distribution Provider will credit the capital provided as if drawn from the Interconnection Financial Security and apply (ii) above.

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**GENERATING FACILITY INTERCONNECTIONS**

Sheet 102

**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)**

(N)

**4. INTERCONNECTION FINANCIAL SECURITY (Cont'd.)**

e. General Effect of Withdrawal of Interconnection Request or Termination of the Generator Interconnection Agreement on Interconnection Financial Security. (Cont'd.)

ii) Schedule for Determining Non-Refundable Portion of the Interconnection Financial Security for Network Upgrades. (Cont'd.)

(3) After Commencement of Construction Activities.

Once Construction Activities on Network Upgrades on behalf of Applicant commence, any withdrawal of the Interconnection Request or termination of the Generator Interconnection Agreement by Applicant will be treated in accordance with this Section F.4.e.

(4) Notification and Accounting by Distribution Provider.

Distribution Provider will notify Applicant within three (3) Business Days of liquidating any Interconnection Financial Security. Within seventy-five (75) Calendar Days of any liquidating event, Distribution Provider will provide Applicant with an accounting of the disposition of the proceeds of the liquidated Interconnection Financial Security and all proceeds not otherwise reimbursed to Applicant or applied to costs incurred or irrevocably committed by Distribution Provider on behalf of Applicant in accordance with this Section F.4.e shall be applied as directed by the Commission. Where an Applicant with remaining proceeds from Interconnection Financial Security cannot be located, such remaining proceeds shall escheat to the State pursuant to the Unclaimed Property Law commencing with the California Code of Civil Procedure § 1500.

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**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

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F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)

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4. INTERCONNECTION FINANCIAL SECURITY (Cont'd.)

e. General Effect of Withdrawal of Interconnection Request or Termination of the Generator Interconnection Agreement on Interconnection Financial Security for Projects Studied Under the Independent Study Process. (Cont'd.)

ii) Schedule for Determining Non-Refundable Portion of the Interconnection Financial Security for Network Upgrades. (Cont'd.)

f. F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)

General Effect of Withdrawal of Interconnection Request or Termination of the Generator Interconnection Agreement on Interconnection Financial Security for Interconnection Requests Studied Under the Distribution Group Study.

Withdrawal of an Interconnection Request or termination of a Generator Interconnection Agreement shall allow Distribution Provider to liquidate the Interconnection Financial Security, or balance thereof, posted by Applicant for Network Upgrades or Distribution Upgrades at the time of withdrawal. To the extent the amount of the liquidated Interconnection Financial Security plus capital, if any, separately provided by Applicant to satisfy its obligation to finance Network Upgrades or Distribution Upgrades in accordance with Section E.4 exceeds the total cost responsibility for Network Upgrades or Distribution Upgrades assigned to Applicant by the final Interconnection Facilities Study, or the final Interconnection System Impact Study if the Interconnection Facilities Study is waived, Distribution Provider shall remit to Applicant the excess amount.

Withdrawal of an Interconnection Request or termination of a Generator Interconnection Agreement shall result in the release to Applicant of any Interconnection Financial Security posted by Applicant for Distribution Provider's Interconnection Facilities, except with respect to any amounts necessary to pay for costs incurred or irrevocably committed by Distribution Provider on behalf of Applicant for Distribution Provider's Interconnection Facilities and for which Distribution Provider has not been reimbursed.

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**GENERATING FACILITY INTERCONNECTIONS**

Sheet 104

**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)**

**5. COMMISSIONING TESTING AND PARALLEL OPERATION**

**a. Commissioning Testing**

Producer Arranges for and Completes Commissioning Testing of Generating Facility and Producer's Interconnection Facilities: Producer is responsible for testing new Generating Facilities and associated Interconnection Facilities according to Section L.5 to ensure compliance with the safety and reliability provisions of this Rule prior to being operated in parallel with Distribution Provider's Distribution or Transmission System. For non-Certified Equipment, Producer shall develop a written testing plan to be submitted to Distribution Provider for its review and acceptance. Alternatively, Producer and Distribution Provider may agree to have Distribution Provider conduct the required testing at Producer's expense. Where applicable, the test plan shall include the installation test procedures published by the manufacturer of the Generating Facility or Interconnection Facilities. Facility testing shall be conducted at a mutually agreeable time, and depending on who conducts the test, Distribution Provider or Producer shall be given the opportunity to witness the tests.

**b. Parallel Operation or Momentary Parallel Operation**

Producer shall not commence Parallel Operation of its Generating Facility with Distribution Provider's system unless it has received Distribution Provider's express written permission to do so. Distribution Provider shall authorize Producer's Generating Facility for Parallel Operation or Momentary Parallel Operation with Distribution Provider's Distribution or Transmission System, in writing, within five (5) Calendar Days of satisfactory compliance with the terms of all applicable agreements. Compliance may include, but not be limited to, provision of any required documentation and satisfactorily completing any required inspections or tests as described herein or in the agreements formed between Producer and Distribution Provider.

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**GENERATING FACILITY INTERCONNECTIONS**

Sheet 105

**F. REVIEW PROCESS FOR INTERCONNECTION REQUESTS (Cont'd.)**

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**6. WITHDRAWAL**

Applicant may withdraw its Interconnection Request at any time by written notice of such withdrawal to Distribution Provider. In addition, after receipt of the Interconnection Request, if Applicant fails to adhere to the requirements and timelines of this tariff, except as provided in Section K (Disputes), Distribution Provider shall deem the Interconnection Request to be withdrawn and shall provide written notice to Applicant of the deemed withdrawal within five (5) Business Days and an explanation of the reasons for such deemed withdrawal. Upon receipt of such written notice, Applicant shall have five (5) Business Days in which to either respond with information or action that either cures the deficiency or supports its position that the deemed withdrawal was erroneous and notifies Distribution Provider of its intent to pursue Dispute Resolution. If Applicant cures the deficiency or supports its position that the deemed withdrawal was erroneous, Applicant shall not lose its queue position established pursuant to Section E.5.

Withdrawal shall result in the removal of the Interconnection Request from the Interconnection Study process. If Applicant disputes the withdrawal and removal from the Interconnection Study process and has elected to pursue Dispute Resolution as set forth in Section K, Applicant's Interconnection Request will not be considered in any ongoing Interconnection Study during the Dispute Resolution process.

In the event of such withdrawal, Distribution Provider, subject to the provisions in Section D.7 and Sections E.3.a, as applicable, shall provide, at Applicant's request, all information that Distribution Provider developed for any completed study conducted up to the date of withdrawal of the Interconnection Request.

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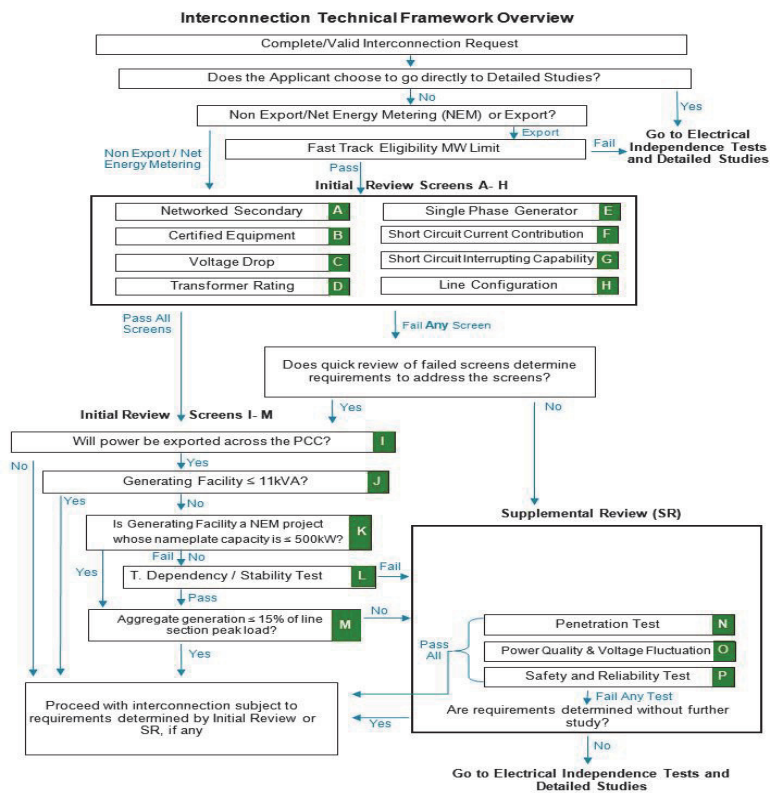
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## ELECTRIC RULE NO. 21 GENERATING FACILITY INTERCONNECTIONS

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### G. ENGINEERING REVIEW DETAILS

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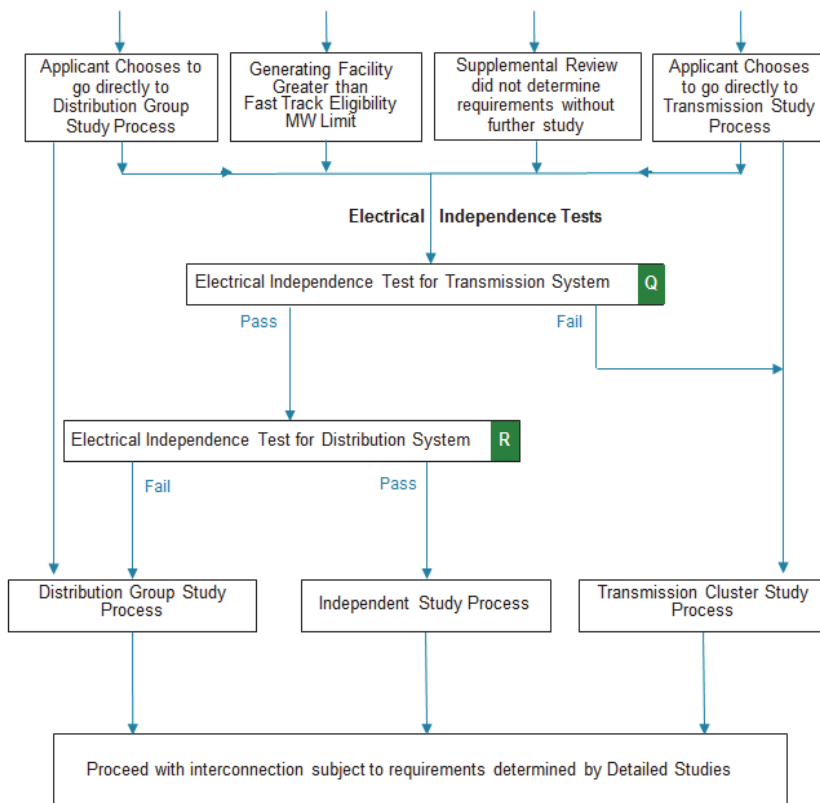
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**G. ENGINEERING REVIEW DETAILS (Cont'd.)**

(N)

**Interconnection Technical Framework- Overview**



(N)

(Continued)

Advice Letter No: 4110-E  
Decision No. 12-09-018

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Field Code Changed



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Original

Cal. P.U.C. Sheet No.  
Cal. P.U.C. Sheet No.

31963-E\*

**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 108

**G. ENGINEERING REVIEW DETAILS (Cont'd.)**

(N)

**1. INITIAL REVIEW SCREENS**

The Initial Review consists of Screens A through M. If any of the Screens A through H are not passed, a quick review of the failed Screen(s) may determine the requirements to address the failure(s). Otherwise, Supplemental Review is required.

Some examples of solutions that may be available to mitigate the impact of a failed Screen A through H are:

1. Replace an overloaded distribution transformer with a larger transformer.
  2. Replace overloaded secondary conductors with larger conductor.
  3. Determine if phase balancing on the transformer is possible with minimal review.
  4. If possible without further study check if the Generating Facility will actually overstress equipment.
- a. Screen A: Is the PCC on a Networked Secondary System?
- If Yes (fail), must go to Supplemental Review except if the Generating Facility is on a Spot Network and meets the following criteria. If the Generating Facility meets the following criteria, continue to Screen B pursuant to Section G.1.

The proposed Generating Facility must utilize an inverter-based equipment package and, together with the aggregated other inverter-based generation, shall not exceed the smaller of 5 % of a Spot Network's maximum load or 50 kW. Under no condition shall the interconnection of a Generating Facility result in a backfeed of a Spot Network or cause unnecessary operation of any Spot Network protectors.

(N)

(Continued)

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**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 109

**G. ENGINEERING REVIEW DETAILS (Cont'd.)**

(N)

**1. INITIAL REVIEW SCREENS (Cont'd.)**

**a. Screen A: Is the PCC on a Networked Secondary System? (Cont'd.)**

- If No (pass), continue to Screen B.

Significance: Special considerations must be given to Generating Facilities proposed to be installed on Networked Secondary Systems because of the design and operational aspects of network protectors. There are no such considerations for radial distribution systems.

**b. Screen B: Is Certified Equipment used?**

Does the Interconnection Request propose to use Certified Equipment as set out in Section L or does the equipment have interim Distribution Provider approval?

- If Yes (pass), continue to Screen C.
- If No (fail) continue to Screen C pursuant to Section G.1.

Interim approval allows Distribution Provider to treat equipment that has not completed this Rule's Certification requirements as having met the intent of this screen. Interim approval is granted at Distribution Provider's discretion on case by case bases, and approval for one Generating Facility does not guarantee approval for any other Generating Facility.

Significance: If the Generating and/or Interconnection Facility has been Certified or previously approved by Distribution Provider, Distribution Provider does not need to repeat its full review and/or test of the Generating and/or Interconnection Facility's Protective Functions. Site Commissioning Testing may still be required to ensure that the Protective Functions are working properly.

Certification indicates that the criteria in Section L, as appropriate, have been tested and verified.

(N)

(Continued)

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**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 110

**G. ENGINEERING REVIEW DETAILS (Cont'd.)**

(N)

**1. INITIAL REVIEW SCREENS (Cont'd.)**

**c. Screen C: Is the Starting Voltage Drop within acceptable limits?**

- If Yes (pass), continue to Screen D.
- If No (fail), continue to Screen D pursuant to Section G.1.

Note: This Screen only applies to Generating Facilities that start by motoring the Generator(s).

Distribution Provider has two options in determining whether Starting Voltage Drop is acceptable. The option to be used is at Distribution Provider's discretion.

Option 1: Distribution Provider may determine that the Generating Facility's starting In-rush Current is equal to or less than the continuous ampere rating of the Customer's service equipment.

Option 2: Distribution Provider may determine the impedances of the service distribution transformer (if present) and the secondary conductors to Customer's service equipment and perform a voltage drop calculation. Alternatively, Distribution Provider may use tables or nomographs to determine the voltage drop. Voltage drops caused by starting a Generator must be less than 2.5% for primary Interconnections and 5% for secondary Interconnections.

Significance:

1. This Screen addresses potential voltage fluctuation problems that may be caused by Generators that start by motoring.
2. When starting, Generating Facilities should have minimal impact on the service voltage to other Distribution Provider Customers.
3. Passing this Screen does not relieve Producer from ensuring that its Generating Facility complies with the flicker requirements of this Rule, Section H.2.d.

(N)

(Continued)

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**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 111

**G. ENGINEERING REVIEW DETAILS (Cont'd.)**

(N)

**1. INITIAL REVIEW SCREENS (Cont'd.)**

- d. Screen D: Is the transformer or secondary conductor rating exceeded?

Do the maximum aggregated Gross Ratings for all the Generating Facilities connected to a secondary distribution transformer exceed the transformer or secondary conductor rating, modified per established Distribution Provider practice, absent any Generating Facilities?

- If Yes (fail), continue to Screen E pursuant to Section G.1.
- If No (pass), continue to screen E.

Significance: This screen addresses potential secondary transformer or secondary conductor overloads. When Distribution Provider's analysis determines a transformer or conductor change is required, Distribution Provider will furnish Applicant with an explanation of why the change is needed.

- e. Screen E: Does the Single-Phase Generator cause unacceptable imbalance?

If the proposed Generating Facility is single-phase and is to be interconnected on a center tap neutral of a 240 volt service, does it cause unacceptable imbalance between the two phases of the 240 volt service?

- If Yes (fail), continue to Screen F pursuant to Section G.1.
- If No (pass), continue to screen F.

(N)

(Continued)

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31967-E\*

**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 112

**G. ENGINEERING REVIEW DETAILS (Cont'd.)**

(N)

**1. INITIAL REVIEW SCREENS (Cont'd.)**

- e. Screen E: Does the Single-Phase Generator cause unacceptable imbalance? (Cont'd.)

Significance: Generating Facilities connected to a single-phase transformer with 120/240 V secondary voltage must be installed such that the aggregated gross output is as balanced as practicable between the two phases of the 240 volt service. When Distribution Provider's analysis determines a transformer change is required. Distribution Provider will furnish the customer with an explanation of why the change is needed.

- f. Screen F: Is the Short Circuit Current Contribution Ratio within acceptable limits?

- If Yes (pass), continue to Screen G.
- If No (fail), continue to Screen G pursuant to Section G.1.

Note: This Screen does not apply to Generating Facilities with a Gross Rating of 11 kVA or less.

When measured at primary side (high side) of the Dedicated Distribution Transformer serving a Generating Facility, the sum of the Short Circuit Contribution Ratios of all Generating Facilities connected to Distribution Provider's Distribution System circuit that serves the Generating Facility must be less than or equal to 0.1.

Significance: If the Generating Facility passes this Screen, it can be expected that it will have no significant impact on Distribution Provider's Distribution System's short circuit duty, fault detection sensitivity, relay coordination or fuse-saving schemes.

(N)

(Continued)

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31968-E\*

**ELECTRIC RULE NO. 21**  
 GENERATING FACILITY INTERCONNECTIONS

Sheet 113

G. ENGINEERING REVIEW DETAILS (Cont'd.)

(N)

1. INITIAL REVIEW SCREENS (Cont'd.)

g. Screen G: Is the Short Circuit Interrupting Capability Exceeded?

Does the proposed Generating Facility, in aggregate with other Generating Facilities on the distribution circuit, cause any distribution protective devices and equipment (including, but not limited to, substation breakers, fuse cutouts, and line reclosers), or Interconnection Request equipment on the system to exceed 87.5 % of the short circuit interrupting capability; or is the Interconnection proposed for a circuit that already exceeds 87.5 % of the short circuit interrupting capability?

- If Yes (fail) continue to Screen H pursuant to Section G.1.
- If No (pass), continue to Screen H

Note: This Screen does not apply to Generating Facilities with a Gross Rating of 11 kVA or less.

Significance: If the Generating Facility passes this screen, it can be expected that it will not cause any of Distribution Provider's equipment to be overstressed.

(N)

(Continued)

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31969-E\*

**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 114

## G. ENGINEERING REVIEW DETAILS (Cont'd.)

(N)

## 1. INITIAL REVIEW SCREENS (Cont'd.)

- h. Screen H: Is the line configuration compatible with the Interconnection type?

- If Yes (pass), continue to Screen I.
- If No (fail), continue to Screen I pursuant to Section G.1.

Note: This Screen does not apply to Generating Facilities with a Gross Rating of 11 kVA or less

Line Configuration Screen: Identify primary distribution line configuration that will serve the Generating Facility. Based on the type of Interconnection to be used for the Generating Facility, determine from Table G.1 if the proposed Generating Facility passes the Screen.

**Table G-1**  
**Type of Interconnection**

Primary Distribution Line Type Configuration	Type of Interconnection to be made to Primary Distribution Line	Result/Criteria
Three-phase, three-wire	Any type	Pass Screen
Three-phase, four-wire	Single-phase, line-to-neutral	Pass Screen
Three-phase, four-wire (For any line that has such a section OR mixed three-wire & four-wire)	All others	To pass, aggregate Generating Facility nameplate rating must be less than or equal to 10% of Line Section peak load

(N)

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31970-E\*

**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 115

## G. ENGINEERING REVIEW DETAILS (Cont'd.)

(N)

## 1. INITIAL REVIEW SCREENS (Cont'd.)

- h. Screen H: Is the line configuration compatible with the Interconnection type? (Cont'd.)

Significance: If the primary distribution line serving the Generating Facility is of a "three-wire" configuration, or if the Generating Facility's distribution transformer is single-phase and connected in a line-to-neutral configuration, then there is no concern about overvoltages to Distribution Provider's, or other Customer's equipment caused by loss of system neutral grounding during the operating time of the Non-Islanding Protective Function.

- i. Screen I: Will power be exported across the PCC?

- If Yes, Continue to Screen J.
- If No, then to ensure that the Generating Facility does not export across the PCC, the Generating Facility must incorporate one of the following five options. Following that selection, Initial Review is complete.

Option 1 ("Reverse Power Protection"): To ensure power is never exported across the PCC, a reverse power Protective Function may be provided. The default setting for this Protective Function shall be 0.1% (export) of the service transformer's rating, with a maximum 2.0 second time delay. For multiple tariff interconnections refer to Section J.8.

(N)

(Continued)

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31971-E

**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 116

## G. ENGINEERING REVIEW DETAILS (Cont'd.)

(N)

## 1. INITIAL REVIEW SCREENS (Cont'd.)

## i. Screen 1: Will power be exported across the PCC? (Cont'd.)

Option 2 ("Minimum Power Protection"): To ensure at least a minimum amount of power is imported across the PCC at all times (and, therefore, that power is not exported), an under-power Protective Function may be provided. The default setting for this Protective Function shall be 5% (import) of Generating Facility's total Gross Rating, with a maximum 2.0 second time delay.

Option 3 (Certified Non-Islanding Protection): To ensure the incidental export of power is limited to acceptable levels, this option requires that all of the following conditions be met: a) the total Gross Capacity of the Generating Facility must be no more than 25% of the nominal ampere rating of Producer's service equipment; b) the total Gross Capacity of the Generating Facility must be no more than 50% of Producer's service transformer capacity rating (this capacity requirement does not apply to Customers taking primary service without an intervening transformer); and c) the Generating Facility must be Certified as Non-Islanding.

The ampere rating of the Customer's service equipment to be used in this evaluation will be that rating for which the customer's utility service was originally sized or for which an upgrade has been approved. It is not the intent of this provision to allow increased export simply by increasing the size of the customer's service panel, without separate approval for the resize.

(N)

(Continued)

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**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 117

**G. ENGINEERING REVIEW DETAILS (Cont'd.)**

(N)

**1. INITIAL REVIEW SCREENS (Cont'd.)**

**i. Screen I: Will power be exported across the PCC? (Cont'd.)**

Option 4 (Relative Generating Facility Rating): This option, when used, requires the Net Rating of the Generating Facility to be so small in comparison to its host facility's minimum load, that the use of additional Protective Functions is not required to ensure that power will not be exported to Distribution Provider's Distribution or Transmission System. This option requires the Generating Facility capacity to be no greater than 50% of Producer's verifiable minimum Host Load over the past 12 months.

Option 5: Inadvertent Export as described in Appendix One.

Significance:

1. If it can be assured that the Generating Facility will not export power, Distribution Provider's Distribution or Transmission System does not need to be studied for load-carrying capability or Generating Facility power flow effects on Distribution Provider voltage regulators.
2. This Screen permits the use of reverse-power or minimum-power relaying as a Non-Islanding Protective Function (Option 1, 2, and 3).
3. This Screen allows, under certain defined conditions, for Generating Facilities that incorporate Certified Non-Islanding protection to qualify for interconnection through the Fast Track process without implementing reverse power or minimum power Protective Functions (Option 3).

(N)

(Continued)

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31973-E\*

**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 118

**G. ENGINEERING REVIEW DETAILS (Cont'd.)**

(N)

**1. INITIAL REVIEW SCREENS (Cont'd.)**

- j. Screen J: Is the Gross Rating of the Generating Facility 11 kVA or less?

- If Yes (pass), skip Screens K, L, and M; ~~and~~ Initial Review is complete.
- If No (fail), continue to Screen K.

Significance: The Generating Facility will have a minimal impact on fault current levels and any potential line overvoltages from loss of Distribution Provider's Distribution System neutral grounding.

- k. Screen K: Is the Generating Facility a Net Energy Metering (NEM) Generating Facility with nameplate capacity less than or equal to 500 kW?

- If Yes (pass), skip screen L and continue to screen M.
- If No (fail), continue to screen L.

Significance: The purpose of this Screen is solely to facilitate interconnection of NEM facilities below this size threshold by allowing such facilities to bypass Screen M. The use of nameplate capacity expedites the Initial Review analysis. In Supplemental Review, the net export will be analyzed.

(N)

(Continued)

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**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 119

## G. ENGINEERING REVIEW DETAILS (Cont'd.)

(N)

## 1. INITIAL REVIEW SCREENS (Cont'd.)

## I. Screen L: Transmission Dependency and Transmission Stability Test

Is the Interconnection Request for an area where: (i) there are known, or posted, transient/dynamic stability limitations, or (ii) the proposed Generating Facility has interdependencies, known to Distribution Provider, with earlier-queued Transmission System interconnection requests. Where (i) or (ii) above are met, the impacts of this Interconnection Request to the Transmission System may require Detailed Study.

- If Yes (fail), Supplemental Review is required.
- If No (pass), continue to Screen M.

Significance: Special consideration must be given to those areas identified as having current or future (due to currently-queued interconnection requests) grid stability concerns.

m. Screen M: Is the aggregate Generating Facility capacity on the Line Section less than 15% of Line Section peak load for all line sections bounded by automatic sectionalizing devices?

- If Yes (pass), Initial Review is complete.
- If No (fail), Supplemental Review is required.

Significance:

1. Low penetration of Generating Facility capacity will have a minimal impact on the operation and load restoration efforts of Distribution Provider's Distribution System.

(N)

(Continued)

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**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 120

**G. ENGINEERING REVIEW DETAILS (Cont'd.)**

(N)

**1. INITIAL REVIEW SCREENS (Cont'd.)**

m. Screen M: Is the aggregate Generating Facility capacity on the Line Section less than 15% of Line Section peak load for all line sections bounded by automatic sectionalizing devices? (Cont'd.)

2. The operating requirements for a high penetration of Generating Facility capacity may be different since the impact on Distribution Provider's Distribution System will no longer be minimal, therefore requiring additional study or controls.

The purpose of this Screen is solely to identify if the Generating Facility needs additional study and is not intended as justification for limiting the penetration of generation on a line section.

**2. SUPPLEMENTAL REVIEW SCREENS**

The Supplemental Review consists of Screens N through P. If any of the Screens are not passed, a quick review of the failed Screen(s) will determine the requirements to address the failure(s) or that Detailed Studies are required. In certain instances, Distribution Provider may be able to identify the necessary solution and determine that Detailed Studies are unnecessary. Some examples of solutions that may be available to mitigate the impact of a failed Screen are:

1. Replacing a fixed capacitor bank with a switched capacitor bank.
2. Adjustment of line regulation settings.
3. Simple reconfiguration of the distribution circuit.

(N)

(Continued)

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**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 121

**G. ENGINEERING REVIEW DETAILS (Cont'd.)**

(N)

**2. SUPPLEMENTAL REVIEW SCREENS (Cont'd.)**

**a. Screen N: Penetration Test**

Where 12 months of line section minimum load data is available, can be calculated, can be estimated from existing data, or determined from a power flow model, is the aggregate Generating Facility capacity on the Line Section less than 100% of the minimum load for all line sections bounded by automatic sectionalizing devices upstream of the Generating Facility?

- If yes (pass), continue to Screen O.
- If no (fail), a quick review of the failure may determine the requirements to address the failure; otherwise Electrical Independence Tests and Detailed Studies are required. Continue to Screen O. (Note: If Electrical Independence tests and Detailed Studies are required, Applicants will continue to the Electrical Independence Tests and Detailed Studies after review of the remaining Supplemental Review Screens, if Applicant elects to proceed.)

Note 1: If none of the above options are available, this screen defaults to Screen N.

Note 2: The type of Generating Facility technology will be taken into account when calculating, estimating, or determining circuit or Line Section minimum load relevant for the application of this screen. For solar Generating Facilities with no battery storage, daytime minimum load will be used (i.e., 10 am to 4 pm for fixed panel solar Generating Facilities and 8 am to 6 pm for solar Generating Facilities utilizing tracking systems), while absolute minimum load will be used for all other Generating Facility technologies.

Note 3: When this screen is being applied to a NEM Generating Facility, the net export in kW, if known, ~~that-which~~ may flow across the Point of Common Coupling into Distribution Provider's Distribution System will be considered as part of the aggregate generation.

(N)

(Continued)

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**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 122

**G. ENGINEERING REVIEW DETAILS (Cont'd.)**

(N)

**2. SUPPLEMENTAL REVIEW SCREENS (Cont'd.)**

**a. Screen N: Penetration Test (Cont'd.)**

Note 4: Distribution Provider will not consider as part of the aggregate Generating Facility capacity for purposes of this screen Generating Facility capacity known to be already reflected in the minimum load data.

Note 5: NEM Generating Facilities with net export less than or equal to 500 kW that may flow across the Point of Common Coupling into Distribution Provider's Distribution or Transmission System will not be studied in the Transmission Cluster Study Process, but may be studied under the Independent Study Process.

Significance: Penetration of Generating Facility capacity that does not result in power flow from the circuit back toward the substation will have a minimal impact on equipment loading, operation, and protection of the Distribution System.

**b. Screen O: Power Quality and Voltage Tests**

In aggregate with existing Generating Facility capacity on the Line Section, distribution circuit, and/or substation.

- a) Can it be determined within the Supplemental Review that the voltage regulation on the line section can be maintained in compliance with Commission Rule 2 and/or Conservation Voltage Regulation voltage requirements under all system conditions?
- b) Can it be determined within the Supplemental Review that the voltage fluctuation is within acceptable limits as defined by IEEE 1453 or utility practice similar to IEEE1453?

(N)

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**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 123

## G. ENGINEERING REVIEW DETAILS (Cont'd.)

(N)

## 2. SUPPLEMENTAL REVIEW SCREENS (Cont'd.)

## b. Screen O: Power Quality and Voltage Tests

In aggregate with existing generation on the line section (Cont'd.)

- c) Can it be determined within the Supplemental Review that the harmonic levels meet IEEE 519 limits at the Point of Common Coupling (PCC)?

- If yes to all of the above (pass), continue to Screen P.
- If no to any of the above (fail), a quick review of the failure may determine the requirements to address the failure; otherwise Electrical Independence Tests and Detailed Studies are required. Continue to Screen P. (Note: If Electrical Independence tests and Detailed Studies are required, Applicants will continue to the Electrical Independence Tests and Detailed Studies after review of the remaining Supplemental Review Screens.)

Significance: Adverse voltages and undesirable interference may be experienced by other Customers on Distribution Provider's Distribution System caused by operation of the Generating Facility(ies).

## c. Screen P: Safety and Reliability Tests

Does the location of the proposed Generating Facility or the aggregate generation capacity on the Line Section create impacts to safety or reliability that cannot be adequately addressed without Detailed Study?

- If yes (fail), review of the failure may determine the requirements to address the failure; otherwise Electrical Independence Tests and Detailed Studies are required. Continue to Section G.3.
- If no (pass), Supplemental Review is complete.

(N)

(Continued)

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Cal. P.U.C. Sheet No.  
Cal. P.U.C. Sheet No.

31979-E\*

**ELECTRIC RULE NO. 21**  
GENERATING FACILITY INTERCONNECTIONS

Sheet 124

## G. ENGINEERING REVIEW DETAILS (Cont'd.)

(N)

## 2. SUPPLEMENTAL REVIEW SCREENS (Cont'd.)

## c. Screen P: Safety and Reliability Tests (Cont'd.)

Significance: In the safety and reliability test, there are several factors that may affect the nature and performance of an Interconnection. These include, but are not limited to:

1. Generating Facility energy source
2. Modes of synchronization
3. Unique system topology
4. Possible impacts to critical load customers
5. Possible safety impacts

The specific combination of these factors will determine if any system study requirements are needed. The following are some examples of the items that may be considered under this screen:

1. Does the Line Section have significant minimum loading levels dominated by a small number of customers (i.e. several large commercial customers)?
2. Is there an even or uneven distribution of loading along the feeder?
3. Is the proposed Generating Facility located in close proximity to the substation (i.e. <2.5 electrical line miles), and is the distribution line from the substation to the customer composed of large conductor/cable (i.e. 600A class cable)?

(N)

(Continued)

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31980-E

**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 125

## G. ENGINEERING REVIEW DETAILS (Cont'd.)

(N)

## 2. SUPPLEMENTAL REVIEW SCREENS (Cont'd.)

## c. Screen P: Safety and Reliability Tests (Cont'd.)

4. Does the Generating Facility incorporate a time delay function to prevent reconnection of the generator to the system until system voltage and frequency are within normal limits for a prescribed time?
5. Is operational flexibility reduced by the proposed Generating Facility, such that transfer of the line section(s) of the Generating Facility to a neighboring distribution circuit/substation may trigger overloads or voltage issues?
6. Does the Generating Facility utilize Certified anti-islanding functions and equipment?

## 3. DETAILED STUDY SCREENS

## a. Screen Q: Is the Interconnection Request electrically Independent of the Transmission System?

Distribution Provider, in consultation with the CAISO, will determine, based on knowledge of the interdependencies with earlier-queued interconnection requests under any tariff, whether the Interconnection Request to the Distribution System is of sufficient MW size and located at a point of interconnection such that it is reasonably anticipated to require or contribute to the need for Network Upgrades. If Distribution Provider determines that no interdependencies exist as described above, then the Interconnection Request will be deemed to have passed Distribution Provider's Determination of Electrical Independence for the CAISO Controlled Grid. If Distribution Provider determines that interdependencies exist as described above, then Applicant may be studied under the Transmission Cluster Study Process as set forth in Section F.3.c.

(N)

(Continued)

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31981-E\*

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**GENERATING FACILITY INTERCONNECTIONS**

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**G. ENGINEERING REVIEW DETAILS (Cont'd.)**

(N)

**3. DETAILED STUDY SCREENS (Cont'd.)**

- a. Screen Q: Is the Interconnection Request electrically Independent of the Transmission System? (Cont'd.)

Distribution Provider will coordinate with the CAISO if necessary to conduct the Determination of Electrical Independence for the CAISO Controlled Grid as set forth in Section 4.2 of Appendix Y to the CAISO Tariff. The results of the incremental power flow, aggregate power flow, and short-circuit current contribution tests set out in Section 4.2 of Appendix Y to the CAISO Tariff will determine whether the Interconnection Request is electrically independent from the CAISO Controlled Grid.

- If Yes (pass), continue to Screen R.
- If No (fail), proceed to Section F.3.c.

Note 1: NEM Generating Facilities with net export less than or equal to 500 kW that may flow across the Point of Common Coupling will not be studied in the Transmission Cluster Study Process, but may be studied under the Independent Study Process.

Significance: Generating Facilities that are electrically interdependent with the Transmission System must be studied with other interconnection requests that have Transmission System interdependencies. It is possible to pass this Screen Q (i.e., be found to have no electrical interdependencies with earlier-queued Distribution System and/or Transmission System interconnection requests as set out above), be studied under the Independent Study Process, and still trigger a Reliability Network Upgrade.

(N)

(Continued)

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**GENERATING FACILITY INTERCONNECTIONS**

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**G. ENGINEERING REVIEW DETAILS (Cont'd.)**

(N)

**3. DETAILED STUDY SCREENS (Cont'd.)**

- b. Screen R: Is the Interconnection Request independent of other earlier-queued and yet to be studied interconnection requests interconnecting to the Distribution System?

For Interconnection Requests that are electrically independent from the CAISO Controlled Grid, Distribution Provider will evaluate each Interconnection Request for known or reasonably anticipated relationships between the Interconnection Request and any earlier-queued interconnection requests in the Distribution Group Study Process, the Independent Study Process, or interconnection requests studied under predecessor interconnection procedures that have yet to complete their respective interconnection studies. Distribution Provider may conduct incremental power flow, aggregate power flow, and/or short-circuit duty tests using existing interconnection studies, Base Case data, overall system knowledge, and engineering judgment to determine whether an Interconnection Request can be studied independently of earlier-queued interconnection requests. If the Interconnection Request being evaluated for electrical independence on the Distribution System may be electrically related to earlier-queued interconnection requests that have yet to complete interconnection studies, then it fails the evaluation of electrical independence for the Distribution System.

- If Yes (pass), continue to Independent Study Process
- If No (fail), continue to the Distribution Group Study Process

Significance: Interconnection Requests that are electrically related to earlier-queued interconnection requests that have not yet been studied do not qualify for independent study.

(N)

(Continued)

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**G. ENGINEERING REVIEW DETAILS (Cont'd.)**

(N)

**3. DETAILED STUDY SCREENS (Cont'd.)**

**c. Independent Study Process and Distribution Group Study Process  
Interconnection Studies**

The Interconnection Studies shall consist of an Interconnection System Impact Study and an Interconnection Facilities Study, referred to as DGS Phase I Interconnection Study and DGS Phase II Interconnection Study, respectively, for the Distribution Group Study Process. The Interconnection Studies will identify Interconnection Facilities, Distribution Upgrades and Reliability Network Upgrades necessary to mitigate thermal overloads and voltage violations, and address short circuit, dynamic-stability and reliability issues associated with the requested Interconnection Service. If Distribution Provider anticipates that Reliability Network Upgrades will be required, or the Interconnection Studies identify the need for Reliability Network Upgrades, then Distribution Provider will coordinate with the CAISO during the study process as set forth in Sections F.3.b or F.3.d above.

The estimated costs of short circuit related upgrades and shared interconnection facilities, if any, identified through a Distribution Group Study shall be assigned to all Interconnection Requests in that Study Group pro rata on the basis of the short circuit duty contribution of each Generating Facility. The estimated costs of all other upgrades and shared interconnection facilities, if any, identified through a Group Study shall be assigned to all Interconnection Requests in that Study Group pro rata on the basis of the maximum megawatt electrical output of each proposed new Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by the Interconnection Customer in its Interconnection Request.

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**G. ENGINEERING REVIEW DETAILS (Cont'd.)**

**3. DETAILED STUDY SCREENS (Cont'd.)**

c. Independent Study Process and Distribution Group Study Process  
Interconnection Studies (Cont'd)

i) Interconnection System Impact and DGS Phase I Interconnection Study.

(1) Scope of the Interconnection System Impact and DGS Phase I  
Interconnection Study.

The Interconnection System Impact Study or DGS Phase I Interconnection Study in the case of the Distribution Group Study Process may consist of a localized short circuit analysis, a stability/dynamic analysis, a power flow analysis, and any other studies that are deemed necessary. The localized short circuit analysis will evaluate impacts to the Distribution and Transmission System only with any local short circuit-duty related Reliability Network Upgrades allocated to the Generating Facility or Generating Facilities that requires the upgrades. Short circuit duty impacts to the CAISO Controlled Grid are appropriately evaluated only in the Transmission Cluster Study Process as set forth in Section F.3.c. The short circuit duty contribution of any Interconnection Requests studied in the Independent Study Process or Distribution Group Study Process that are subsequently identified in the Transmission Cluster Study Process will be allocated ~~its~~ their pro rata share of the short circuit duty-related Reliability Network Upgrades on the basis of the short circuit duty contribution of each Generating Facility.

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**GENERATING FACILITY INTERCONNECTIONS**

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**G. ENGINEERING REVIEW DETAILS (Cont'd.)**

(N)

**3. DETAILED STUDY SCREENS (Cont'd.)**

**c. Independent Study Process and Distribution Group Study Process  
Interconnection Studies (Cont'd.)**

**i) Interconnection System Impact Study and DGS Phase I  
Interconnection Study. (Cont'd.)**

**(1) Scope of the Interconnection System Impact Study and DGS  
Phase I Interconnection Study. (Cont'd.)**

The Interconnection System Impact Study or DGS Phase I  
Interconnection Study in the case of the Distribution Group  
Study Process, shall state the assumptions upon which it is  
based, state the results of the analyses, and provide the  
requirement or potential impediments to providing the  
requested Interconnection Service, including a preliminary  
indication of the cost and length of time that would be  
necessary to correct any problems identified in those analyses  
and implement the Interconnection.

The Interconnection System Impact Study or DGS Phase I  
Interconnection Study shall provide a list of Distribution  
Provider's Interconnection Facilities, Distribution Upgrades,  
and Reliability Network Upgrades that are required as a result  
of the Interconnection Request along with a non-binding good  
faith estimate of cost responsibility and the amount of  
construction time required.

(N)

(Continued)

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**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 131

**G. ENGINEERING REVIEW DETAILS (Cont'd.)**

**3. DETAILED STUDY SCREENS (Cont'd.)**

c. Independent Study Process and Distribution Group Study Process Interconnection Studies (Cont'd.)

ii) Interconnection Facilities Study and DGS Phase II Interconnection Study.

(1) Scope and Purpose of the Interconnection Facilities and DGS Phase II Interconnection Study. (Cont'd)

If at any time the Distribution Provider determines that it will not meet the required time frame for completing the DGS Phase I Interconnection Study due to the large number of Interconnection Requests in the Distribution Group Study Application Window, study complexity, or unavailability of resources on a reasonable basis to perform the study in the required time frame, the Distribution Provider shall notify the Interconnection Customer(s) within the Distribution Group Study as to the schedule status of the DGS Phase I Interconnection Study and provide an estimated completion date with an explanation of the reasons why additional time is required.

Upon request, the Distribution Provider shall provide the Applicant(s) all supporting documentation, work papers and relevant pre-Interconnection Request and post-Interconnection Request power flow, short circuit and stability databases for the DGS Phase I Interconnection Study, subject to confidentiality arrangements as outlined in Section D.7.

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The Interconnection Facilities Study or DGS Phase II Interconnection Study in the case of the Distribution Group Study Process shall specify and estimate the cost of the equipment, engineering, procurement, and construction work (including overheads) needed to implement the conclusions of the Interconnection System Impact Study or DGS Phase I Interconnection Study technical analyses in accordance with Good Utility Practice to physically and electrically connect the Generating Facility to the Distribution or Transmission System. The Interconnection Facilities Study or DGS Phase II Interconnection Study shall also identify (i) the electrical switching configuration of the connection equipment, including, without limitation: the transformer, switchgear, meters, and other station equipment; the nature and estimated cost of any Distribution Provider's Interconnection Facilities, Distribution Upgrades, and Network Upgrades necessary to accomplish the interconnection; and an estimate of the time required to complete the construction and installation of such facilities. The Interconnection Facilities Study or DGS Phase II Interconnection Study in the case of the Distribution Group Study Process will update, as necessary, analyses performed in the Interconnection System Impact Study or DGS Phase I Interconnection Study in the case of the Distribution Group Study Process, to account for withdrawal of interconnection requests in the interconnection queue.

**H. GENERATING FACILITY DESIGN AND OPERATING REQUIREMENTS**

This section is consistent with the requirements of ANSI/IEEE 1547-2003 Standard for Interconnecting Distributed Resources with Electric Power Systems (IEEE 1547). Exceptions are taken to IEEE 1547 Clauses 4.1.4.2 Distribution Secondary Spot Networks and Clauses 4.1.8.1 or 5.1.3.1, which address Protection from Electromagnetic Interference. These are being studied for inclusion in a subsequent version of this Rule. Also, Rule 21 does not adopt the Generating Facility power limitation of 10 MW incorporated in IEEE 1547.

(Continued)

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**GENERATING FACILITY INTERCONNECTIONS**

Sheet 133

**H. GENERATING FACILITY DESIGN AND OPERATING REQUIREMENTS**  
(Cont'd.)

(N)

**1. GENERAL INTERCONNECTION AND PROTECTIVE FUNCTION REQUIREMENTS**

The Protective Functions and requirements of this Rule are designed to protect Distribution Provider's Distribution and Transmission System and not the Generating Facility. A Producer shall be solely responsible for providing adequate protection for its Generating Facility and Interconnection Facilities. Producer's Protective Functions shall not impact the operation of other Protective Functions on Distribution Provider's Distribution and Transmission System in a manner that would affect Distribution Provider's capability of providing reliable service to its customers.

**a. Protective Functions Required**

Generating Facilities operating in parallel with Distribution Provider's Distribution or Transmission System shall be equipped with the following Protective Functions to sense abnormal conditions on Distribution Provider's Distribution or Transmission System and cause the Generating Facility to be automatically disconnected from Distribution Provider's Distribution or Transmission System or to prevent the Generating Facility from being connected to Distribution Provider's Distribution or Transmission System inappropriately:

- (1) Over and under voltage trip functions and over and under frequency trip functions;
- (2) A voltage and frequency sensing and time-delay function to prevent the Generating Facility from energizing a de-energized Distribution or Transmission System circuit and to prevent the Generating Facility from reconnecting with Distribution Provider's Distribution or Transmission System unless Distribution Provider's Distribution System service voltage and frequency is within the ANSI C84.1-1995 Table 1 Range B voltage Range of 106 volts to 127 volts (on a 120 volt basis), inclusive, and a frequency range of 59.3 Hz to 60.5 Hz, inclusive, and are stable for at least 60 seconds; and

(N)

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**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 134

**H. GENERATING FACILITY DESIGN AND OPERATING REQUIREMENTS**  
(Cont'd.)

(N)

**1. GENERAL INTERCONNECTION AND PROTECTIVE FUNCTION**  
**REQUIREMENTS (Cont'd.)**

**a. Protective Functions Required (Cont'd.)**

- (3) A function to prevent the Generating Facility from contributing to the formation of an Unintended Island, and cease to energize Distribution Provider's Distribution System within two seconds of the formation of an Unintended Island.

The Generating Facility shall cease to energize Distribution Provider's Distribution System for faults on Distribution Provider's Distribution System circuit to which it is connected (IEEE 1547-4.2.1). The Generating Facility shall cease to energize Distribution Provider's Distribution circuit prior to re-closure by Distribution Provider's Distribution System equipment (IEEE 1547-4.2.2).

**b. Momentary Paralleling Generating Facilities**

With Distribution Provider's approval, the transfer switch or scheme used to transfer Producer's loads from Distribution Provider's Distribution or Transmission System to Producer's Generating Facility may be used in lieu of the Protective Functions required for Parallel Operation.

(N)

(Continued)

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**ELECTRIC RULE NO. 21**  
 GENERATING FACILITY INTERCONNECTIONS

Sheet 135

**H. GENERATING FACILITY DESIGN AND OPERATING REQUIREMENTS**  
 (Cont'd.)

(N)

**1. GENERAL INTERCONNECTION AND PROTECTIVE FUNCTION**  
 REQUIREMENTS (Cont'd.)

**c. Suitable Equipment Required**

Circuit breakers or other interrupting equipment located at the Point of Common Coupling (PCC) must be Certified or "Listed" (as defined in Article 100, the Definitions Section of the National Electrical Code) as suitable for their intended application. This includes being capable of interrupting the maximum available fault current expected at their location. Producer's Generating Facility and Interconnection Facilities shall be designed so that the failure of any single device or component shall not potentially compromise the safety and reliability of Distribution Provider's Distribution and Transmission System. The Generating Facility paralleling-device shall be capable of withstanding 220% of the Interconnection Facility rated voltage (IEEE 1547-4.1.8.3). The Interconnection Facility shall have the capability to withstand voltage and current surges in accordance with the environments defined in IEEE Std C62.41.2-2002 or IEEE Std C37.90.1-2002 as applicable and as described in L.3.e (IEEE 1547-4.1.8.2).

**d. Visible Disconnect Required**

When required by Distribution Provider's operating practices, Producer shall furnish and install a ganged, manually-operated isolating switch (or a comparable device mutually agreed upon by Distribution Provider and Producer) near the Point of Interconnection to isolate the Generating Facility from Distribution Provider's Distribution or Transmission System. The device does not have to be rated for load break nor provide over-current protection.

(N)

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**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 136

**H. GENERATING FACILITY DESIGN AND OPERATING REQUIREMENTS**  
(Cont'd.)

(N)

**1. GENERAL INTERCONNECTION AND PROTECTIVE FUNCTION**  
**REQUIREMENTS (Cont'd.)**

**d. Visible Disconnect Required (Cont'd.)**

The device must:

- (1) allow visible verification that separation has been accomplished.  
(This requirement may be met by opening the enclosure to observe contact separation.)
- (2) include markings or signage that clearly indicates open and closed positions.
- (3) a) for Emergency purposes be capable of being reached quickly and conveniently 24 hours a day by Distribution Provider personnel for construction, operation, maintenance, inspection, testing or to isolate the Generating Facility from Distribution Provider's Distribution or Transmission System without obstacles or requiring those seeking access to obtain keys, special permission, or security clearances.
- (3) b) for Non-Emergency purposes be capable of being reached during normal business hours. Distribution Provider, where possible, will provide notice to Customer for gaining access to Customer's premises.
- (4) be capable of being locked in the open position

(N)

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**ELECTRIC RULE NO. 21**  
GENERATING FACILITY INTERCONNECTIONS

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**H. GENERATING FACILITY DESIGN AND OPERATING REQUIREMENTS**  
(Cont'd.)

(N)

**1. GENERAL INTERCONNECTION AND PROTECTIVE FUNCTION**  
REQUIREMENTS (Cont'd.)

**d. Visible Disconnect Required (Cont'd.)**

- (5) be clearly marked on the submitted single line diagram and its type and location approved by Distribution Provider prior to installation. If the device is not adjacent to the PCC, permanent signage must be installed at a Distribution Provider approved location providing a clear description of the location of the device. If the switch is not accessible outside the locked premises, signage with contact information and a Distribution Provider approved locking device for the premises shall be installed.

Generating Facilities with Non-Islanding inverters totaling one (1) kilovolt-ampere (kVA) or less are exempt from this requirement.

**e. Drawings Required**

Prior to Parallel Operation or Momentary Parallel Operation of the Generating Facility, Distribution Provider shall approve Producer's Protective Function and control diagrams. Generating Facilities equipped with Protective Functions and a control scheme previously approved by Distribution Provider for system-wide application or only Certified Equipment may satisfy this requirement by reference to previously approved drawings and diagrams.

**f. Generating Facility Conditions Not Identified**

In the event this Rule does not address the Interconnection conditions for a particular Generating Facility, Distribution Provider and Producer may agree upon other arrangements.

(N)

(Continued)

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31991-E

**ELECTRIC RULE NO. 21**  
 GENERATING FACILITY INTERCONNECTIONS

Sheet 138

**H. GENERATING FACILITY DESIGN AND OPERATING REQUIREMENTS**  
 (Cont'd.)

(N)

**2. PREVENTION OF INTERFERENCE**

Producer shall not operate Generating or Interconnection Facilities that superimpose a voltage or current upon Distribution Provider's Distribution or Transmission System that interferes with Distribution Provider operations, service to Distribution Provider Customers, or communication facilities. If such interference occurs, Producer must diligently pursue and take corrective action at its own expense after being given notice and reasonable time to do so by Distribution Provider. If Producer does not take corrective action in a timely manner, or continues to operate the facilities causing interference without restriction or limit, Distribution Provider may, without liability, disconnect Producer's facilities from Distribution Provider's Distribution or Transmission System, in accordance with Section D.9 of this Rule. To eliminate undesirable interference caused by its operation, each Generating Facility shall meet the following criteria:

**a. Voltage Regulation**

The Generating Facility shall not actively regulate the voltage at the PCC while in parallel with Distribution Provider's Distribution System. The Generating Facility shall not cause the service voltage at other customers to go outside the requirements of ANSI C84.1-1995, Range A (IEEE 1547-4.1.1).

(N)

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**ELECTRIC RULE NO. 21**  
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**H. GENERATING FACILITY DESIGN AND OPERATING REQUIREMENTS**  
(Cont'd.)

(N)

**2. PREVENTION OF INTERFERENCE (Cont'd.)**

**b. Voltage Trip Setting**

The voltage ranges in Table H.1 define protective trip limits for the Protective Function and are not intended to define or imply a voltage regulation Function. Generating Facilities shall cease to energize Distribution Provider's Distribution System within the prescribed trip time whenever the voltage at the PCC deviates from the allowable voltage operating range. The Protection Function shall detect and respond to voltage on all phases to which the Generating Facility is connected.

**i) Generating Facilities (30 kVA or less)**

Generating Facilities with a Gross Rating of 30 kVA or less shall be capable of operating within the voltage range normally experienced on Distribution Provider's Distribution System from plus to minus 5% of the nominal voltage (e.g. 114 volts to 126 volts, on a 120 volt base), at the service panel or PCC. The trip settings at the generator terminals may be selected in a manner that minimizes nuisance tripping between 106 volts and 132 volts on a 120-volt base (88%-110% of nominal voltage) to compensate for voltage drop between the generator terminals and the PCC. Voltage may be detected at either the PCC or the Point of Interconnection. However, the voltage range at the PCC, with the generator on-line, shall stay within +/-5% of nominal.

(N)

(Continued)

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**H. GENERATING FACILITY DESIGN AND OPERATING REQUIREMENTS**  
(Cont'd.)

(N)

**2. PREVENTION OF INTERFERENCE (Cont'd.)**

**b. Voltage Trip Setting (Cont'd.)**

**ii) Generating Facilities (greater than 30 kVA)**

Distribution Provider may have specific operating voltage ranges for Generating Facilities with Gross Ratings greater than 30 kVA, and may require adjustable operating voltage settings. In the absence of such requirements, the Generating Facility shall be capable of operating at a range between 88% and 110% of the applicable interconnection voltage. Voltage shall be detected at either the PCC or the Point of Interconnection, with settings compensated to account for the voltage at the PCC. However, the voltage range at the PCC, with the generator on-line, shall stay within +/-5% of nominal.

**iii) Voltage Disturbances**

Whenever Distribution Provider's Distribution System voltage at the PCC varies from and remains outside normal (Nominally 120 volts) for the predetermined parameters set forth in Table H-1, the Generating Facility's Protective Functions shall cause the Generator(s) to become isolated from Distribution Provider's Distribution System:

(N)

(Continued)

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**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

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**H. GENERATING FACILITY DESIGN AND OPERATING REQUIREMENTS**  
(Cont'd.)

(N)

**2. PREVENTION OF INTERFERENCE (Cont'd.)**

**b. Voltage Trip Setting (Cont'd.)**

**iii) Voltage Disturbances (Cont'd.)**

Table H.1: Voltage Trip Settings for Generating Facilities\*

Voltage at Point of Common Coupling (the ranges below are used to trip the generator during abnormal distribution system conditions)		Maximum Trip Time**	
Assuming 120 Volt Base	% of Nominal Voltage	# of Cycles (Assuming 60 Hz Nominal)	Seconds
Less than 60 volts	Less than 50%	10 Cycles	0.16 Seconds
Greater than or equal to 60 volts but less than 106 volts	Greater than or equal to 50% but less than 88%	120 Cycles	2 Seconds
Greater than 132 volts but less than or equal to 144 volts	Greater than 110% but less than or equal to 120%	60 Cycles	1 Second
Greater than 144 volts	Greater than 120%	10 Cycles	0.16 Seconds

\*For Generating Facilities with a Rating greater than 30 kVA, set points shall be field adjustable and different voltage set points and trip times from those in Table H.1 may be negotiated with Distribution Provider

\*\* "Maximum Trip Time" refers to the time between the onset of the abnormal condition and the Generating Facility ceasing to energize Distribution Provider's Distribution System. Protective Function equipment and circuits may remain connected to Distribution Provider's Distribution System to allow sensing of electrical conditions for use by the "reconnect" feature. The purpose of the allowed time delay is to allow for a Generating Facility to minimize tripping during short term system disturbances. Set points shall not be user adjustable for generating facilities less than 30 kW.

(N)

(Continued)

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**GENERATING FACILITY INTERCONNECTIONS**

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**H. GENERATING FACILITY DESIGN AND OPERATING REQUIREMENTS**  
(Cont'd.)

(N)

**2. PREVENTION OF INTERFERENCE (Cont'd.)**

**c. Paralleling**

The Generating Facility shall parallel with Distribution Provider's Distribution or Transmission System without causing a voltage fluctuation at the PCC greater than plus/minus 5% of the prevailing voltage level of Distribution Provider's Distribution or Transmission System at the PCC, and meet the flicker requirements of Section H.2.d. Section L, Certification and Testing Criteria, provides technology-specific tests for evaluating the paralleling Function. (IEEE 1547-4.1.3)

**d. Flicker**

The Generating Facility shall not create objectionable flicker for other customers on Distribution Provider's Distribution or Transmission System. To minimize the adverse voltage effects experienced by other customers (IEEE 1547-4.3.2), flicker at the PCC caused by the Generating Facility should not exceed the limits defined by the "Maximum Borderline of Irritation Curve" identified in IEEE 519-1992 (IEEE Recommended Practices and Requirements for Harmonic Control in Electric Power Systems, IEEE STD 519-1992). This requirement is necessary to minimize the adverse voltage affects experienced by other Customers on Distribution Provider's Distribution or Transmission System. Generators may be connected and brought up to synchronous speed (as an induction motor) provided these flicker limits are not exceeded.

(N)

(Continued)

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**H. GENERATING FACILITY DESIGN AND OPERATING REQUIREMENTS**  
(Cont'd.)

(N)

**2. PREVENTION OF INTERFERENCE (Cont'd.)**

**e. Integration with Distribution Provider's Distribution System Grounding**

The grounding scheme of the Generating Facility shall not cause over-voltages that exceed the rating of the equipment connected to Distribution Provider's Distribution System and shall not disrupt the coordination of the ground fault protection on Distribution Provider's Distribution System (IEEE 1547-4.1.2) (See Section G.1.i, line configuration).

**f. Frequency**

Distribution Provider controls system frequency, and the Generating Facility shall operate in synchronism with Distribution Provider's Distribution or Transmission System. Whenever Distribution Provider's Distribution or Transmission System frequency at the PCC varies from and remains outside normal (nominally 60 Hz) by the predetermined amounts set forth in Table H.2, the Generating Facility's Protective Functions shall cease to energize Distribution Provider's Distribution or Transmission System within the stated maximum trip time.

(N)

(Continued)

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**H. GENERATING FACILITY DESIGN AND OPERATING REQUIREMENTS**  
(Cont'd.)

(N)

**2. PREVENTION OF INTERFERENCE (Cont'd.)**

**f. Frequency (Cont'd.)**

***Table H.2***  
***Frequency Trip Settings***

<u>Generating Facility Rating</u>	<u>Frequency Range</u> (Assuming 60Hz Nominal)	<u>Maximum Trip Time [1]</u> (Assuming 60 Cycles per Second)
Less or equal to 30kW	Less than 59.3 Hz	10 Cycles
	Greater than 60.5 Hz	10 Cycles
Greater than 30 kW	Less than 57.0 Hz	10 Cycles
	Less than an adjustable value between 59.8 Hz and 57 Hz but greater than 57 Hz. [2]	Adjustable between 10 and 18,000 Cycles. [2, 3]
	Greater than 60.5 Hz.	10 Cycles

[1] – "Maximum Trip time" refers to the time between the onset of the abnormal condition and the Generating Facility ceasing to energize Distribution Provider's Distribution or Transmission System. Protective Function sensing equipment and circuits may remain connected to Distribution Provider's Distribution or Transmission System to allow sensing of electrical conditions for use by the "reconnect" feature. The purpose of the allowed time delay is to allow a Generating Facility to "ride through" short-term disturbances to avoid nuisance tripping. Set points shall not be user adjustable (though they may be field adjustable by qualified personnel). For Generating Facilities with a Gross Rating greater than 30 kVA, set points shall be field adjustable and different voltage set points and trip times from those in Table H.2 may be negotiated with Distribution Provider.

[2] – Unless otherwise required by Distribution Provider, a trip frequency of 59.3 Hz and a maximum trip time of 10 cycles shall be used.

[3] – When a 10 cycle Maximum trip time is used, a second under frequency trip setting is not required.

(N)

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**H. GENERATING FACILITY DESIGN AND OPERATING REQUIREMENTS**  
(Cont'd.)

(N)

**2. PREVENTION OF INTERFERENCE (Cont'd.)**

**g. Harmonics**

When the Generating Facility is serving balanced linear loads, harmonic current injection into Distribution Provider's Distribution or Transmission System at the PCC shall not exceed the limits stated in Table H.3. The harmonic current injections shall be exclusive of any harmonic currents due to harmonic voltage distortion present in Distribution Provider's Distribution or Transmission System without the Generating Facility connected (IEEE 1547-4.3.3.). The harmonic distortion of a Generating Facility shall be evaluated using the same criteria as for the Host Loads.

**Table H.3**

**Maximum harmonic current distortion in percent of current (I) [1,2]**

Individual harmonic order, h (odd harmonics) [3]	h<11	11≤h<17	17≤h<23	23≤h<35	35≤h	Total demand distortion
Max Distortion (%)	4.0	2.0	1.5	0.6	0.3	5.0

[1] – IEEE1547-4.3.3

[2] – I = the greater of the maximum Host Load current average demand over 15 or 30 minutes without the GF, or the GF rated current capacity (transformed to the PCC when a transformer exists between the GF and the PCC).

[3] – Even harmonics are limited to 25% of the odd harmonic limits above.

(N)

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**H. GENERATING FACILITY DESIGN AND OPERATING REQUIREMENTS**  
(Cont'd.)

(N)

**2. PREVENTION OF INTERFERENCE (Cont'd.)**

**h. Direct Current Injection**

Generating Facilities should not inject direct current greater than 0.5% of rated output current into Distribution Provider's Distribution or Transmission System.

**i. Power Factor**

Producer shall provide adequate reactive power compensation on site to maintain the Generating Facility power factor near unity at rated output or a Distribution Provider specified power factor within a power factor range from 0.9 leading to 0.9 lagging, based on local system conditions. While not required, for generators that do not have inherent reactive power control capability Distribution Provider at its option may offer reactive power support in the form of power factor correction capacitors on its Distribution or Transmission System, under a Generator Interconnection Agreement or an Added Facilities or Special Facilities agreement, as described in Rule 2.H, as applicable.

(N)

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Sheet 147

**H. GENERATING FACILITY DESIGN AND OPERATING REQUIREMENTS**  
(Cont'd.)

(N)

**3. TECHNOLOGY SPECIFIC REQUIREMENTS**

**a. Technology Specific Requirements**

Three-Phase Synchronous Generators: For three phase Generators, the Generating Facility circuit breakers shall be three-phase devices with electronic or electromechanical control. Producer shall be responsible for properly synchronizing its Generating Facility with Distribution Provider's Distribution or Transmission System by means of either manual or automatic synchronous equipment. Automatic synchronizing is required for all synchronous Generators that have a Short Circuit Contribution Ratio (SCCR) exceeding 0.05. Loss of synchronism protection is not required except as may be necessary to meet Section H.2.d (Flicker) (IEEE1547-4.2.5). Unless otherwise agreed upon by Producer and Distribution Provider, synchronous Generators shall automatically regulate power factor, not voltage, while operating in parallel with Distribution Provider's Distribution System. A power system stabilization Function is specifically not required for Generating Facilities under 10 MW Net Rating.

**b. Induction Generators**

Induction Generators (except self-excited Induction Generators) do not require a synchronizing Function. Starting or rapid load fluctuations on induction Generators can adversely impact Distribution Provider's Distribution or Transmission System voltage. Corrective step-switched capacitors or other techniques may be necessary and may cause undesirable ferro-resonance. When these counter measures (e.g. additional capacitors) are installed on Producer's side of the PCC, Distribution Provider must review these measures. Additional equipment may be required as determined in a Supplemental Review or an Interconnection Study.

(N)

(Continued)

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Sheet 148

**H. GENERATING FACILITY DESIGN AND OPERATING REQUIREMENTS**  
(Cont'd.)

(N)

**3. TECHNOLOGY SPECIFIC REQUIREMENTS (Cont'd.)**

**c. Inverters**

Grid-interactive inverters do not require separate synchronizing equipment. Non-grid-interactive or "stand-alone" inverters shall not be used for Parallel Operation with Distribution Provider's Distribution or Transmission System.

**4. SUPPLEMENTAL GENERATING FACILITY REQUIREMENTS**

**a. Fault Detection**

A Generating Facility with an SCCR exceeding 0.1 or one that does not cease to energize Distribution Provider's Distribution or Transmission System within two seconds of the formation of an Unintended Island shall be equipped with Protective Functions designed to detect Distribution or Transmission System faults, both line-to-line and line-to-ground, and cease to energize Distribution Provider's Distribution or Transmission System within two seconds of the initiation of a fault.

**b. Transfer Trip**

For a Generating Facility that cannot detect Distribution or Transmission System faults (both line-to-line and line-to-ground) or the formation of an Unintended Island, and cease to energize Distribution Provider's Distribution or Transmission System within two seconds, Distribution Provider may require a Transfer Trip system or an equivalent Protective Function.

(N)

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Sheet 149

**H. GENERATING FACILITY DESIGN AND OPERATING REQUIREMENTS (Cont'd.)**

(N)

**4. SUPPLEMENTAL GENERATING FACILITY REQUIREMENTS (Cont'd.)**

**c. Reclose Blocking**

Where the aggregate Generating Facility capacity exceeds 15% of the peak load on any automatic reclosing device, Distribution Provider may require additional Protective Functions, including, but not limited to reclose-blocking on some of the automatic reclosing devices.

**I. THIRD-PARTY INSTALLATIONS, RESERVATION OF UNUSED FACILITIES, AND REFUND OF SALVAGE VALUE**

**1. INTERCONNECTION FACILITIES AND DISTRIBUTION UPGRADES**

Except as provided for in the Generator Interconnection Agreement of this Rule, Interconnection Facilities connected to Distribution Provider's side of the PCC and Distribution Upgrades shall be provided, installed, owned, and maintained by Distribution Provider at Producer's expense.

**2. THIRD-PARTY INSTALLATIONS**

Subject to the approval of Distribution Provider, a Producer may, at its option, employ a qualified contractor to provide and install Interconnection Facilities or Distribution Upgrades, to be owned and operated by Distribution Provider, on Distribution Provider's side of the PCC. Such Interconnection Facilities and Distribution Upgrades shall be installed in accordance with Distribution Provider's design and specifications. Upon final inspection and acceptance by Distribution Provider, Producer shall transfer ownership of such Producer installed Interconnection Facilities or Distribution Upgrades to Distribution Provider and such facilities shall thereafter be owned and maintained by Distribution Provider at Producer's expense. Producer shall pay Distribution Provider's reasonable cost of design, administration, and monitoring of the installation for such facilities to ensure compliance with Distribution Provider's requirements. Producer shall also be responsible for all costs, including any income tax liability, associated with the transfer of Producer installed Interconnection Facilities and Distribution Upgrades to Distribution Provider.

(N)

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**H. GENERATING FACILITY DESIGN AND OPERATING REQUIREMENTS**  
(Cont'd.)

(N)

**3. RESERVATION OF UNUSED FACILITIES**

When a Producer wishes to reserve Distribution Provider-owned Interconnection Facilities or Distribution Upgrades installed and operated as Added Facilities for Producer at Producer's expense, but idled by a change in the operation of Producer's Generating Facility or otherwise, Producer may elect to abandon or reserve such facilities consistent with the terms of its agreement with Distribution Provider. If Producer elects to reserve idle Interconnection Facilities or Distribution Upgrades, Distribution Provider shall be entitled to continue to charge Producer for the costs related to the ongoing operation and maintenance of the Added Facilities.

**4. REFUND OF SALVAGE VALUE**

When a Producer elects to abandon the Special Facilities or Added Facilities for which it has either advanced the installed costs or constructed and transferred to Distribution Provider, Producer shall, at a minimum, receive from Distribution Provider a credit for the net salvage value of the Added Facilities.

**J. METERING, MONITORING AND TELEMETERING**

**1. GENERAL REQUIREMENTS**

All Generating Facilities shall be metered in accordance with this Section J and shall meet all applicable standards of Distribution Provider contained in Distribution Provider's applicable tariffs and published Distribution Provider manuals dealing with Metering specifications.

**2. METERING BY NON-DISTRIBUTION PROVIDER PARTIES**

The ownership, installation, operation, reading, and testing of revenue Metering Equipment for Generating Facilities shall be by Distribution Provider except to the extent that the Commission authorizes any or all these services be performed by others.

(N)

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**J. METERING, MONITORING AND TELEMETERING (Cont'd.)**

(N)

**3. NET GENERATION OUTPUT METERING**

Generating Facility customers may be required to install Net Generation Output Metering for evaluation, monitoring, and verification purposes and to determine applicable standby and non-bypassable charges as defined in Distribution Provider's tariffs, to satisfy applicable California Independent System Operator (CAISO) reliability requirements, and for Distribution System planning and operations.

However, Generating Facility customers do not need to install Net Generation Output Metering where less intrusive and/or more cost effective options, for Producer/Customer, are available for providing generator data to Distribution Provider. These Generating Facilities may opt to have Distribution Provider estimate load data in accordance with Distribution Provider's applicable tariffs to determine or meet applicable standby and non-bypassable and other applicable charges and tariff requirements. However, if a Generating Facility customer objects to Distribution Provider's estimate of the Generator(s) output, the customer may elect to install the Net Generation Output Metering, or have Distribution Provider install Net Generation Output Metering at the customer's expense.

- (a) All metering options available to the customer must conform to the requirements set forth in Distribution Provider's Rule 22. If Distribution Provider does not receive meter data in accordance with Rule 22, Distribution Provider shall have the right to install Distribution Provider-owned Net Generation Output Metering at the customer's expense. The relevant factors in determining the need for Net Generation Output Metering are as listed below:

- (a) Data requirements in proportion to need for information;  
(b) Producer's election to install equipment that adequately addresses Distribution Provider's operational requirements;

(N)

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**J. METERING, MONITORING AND TELEMETERING (Cont'd.)**

(N)

**3. NET GENERATION OUTPUT METERING (Cont'd.)**

- (c) Accuracy and type of required Metering consistent with purposes of collecting data;
- (d) Cost of Metering relative to the need for and accuracy of the data;
- (e) The Generating Facility's size relative to the cost of the Metering/monitoring;
- (f) Other means of obtaining the data (e.g. Generating Facility logs, proxy data, etc.);
- (g) Requirements under any Generator Interconnection Agreement with Producer.

The requirements in this Section may not apply to Metering of Generating Facilities operating under Distribution Provider's Net Energy Metering tariff pursuant to California PUC section 2827, et seq. Nothing in this Section J.3 supersedes Section D.4, Compliance with Laws, Rules and Tariff Schedules.

Distribution Provider will report to the Commission or designated authority, on a quarterly basis, the rationale for requiring Net Generation Output Metering equipment in each instance along with the size and location of the facility.

**4. POINT OF COMMON COUPLING (PCC) METERING**

For purposes of assessing Distribution Provider's charges for retail service, Producer's PCC Metering shall be reviewed by Distribution Provider, and if required, replaced to ensure that it will appropriately measure electric power according to the provisions of the Customer's electric service Tariff. Where required, the Customer's existing meter may be replaced with a bi-directional meter so that power deliveries to and from Producer's site can be separately recorded. Alternately,

(N)

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**J. METERING, MONITORING AND TELEMETERING (Cont'd.)**

(N)

**4. POINT OF COMMON COUPLING (PCC) METERING (Cont'd.)**

Producer may, at its sole option and cost, require Distribution Provider to install multi-metering equipment to separately record power deliveries to Distribution Provider's Distribution System and retail purchases from Distribution Provider. Where necessary, such PCC Metering shall be designed to prevent reverse registration.

Generating Facilities for Net Energy Metering under PUC sections 2827, et seq. shall have metering provided pursuant to the terms of the applicable Net Energy Metering Tariff Schedule.

**5. TELEMETERING**

If the nameplate rating of the Generating Facility is 1 MW or greater, Telemetering equipment at the Net Generation Output Metering location may be required at Producer's expense. If the Generating Facility is Interconnected to a portion of Distribution Provider's Distribution System operating at a voltage below 10 kV, then Telemetering equipment may be required on Generating Facilities 250 kW or greater. -Distribution Provider shall only require Telemetering to the extent that less intrusive and/or more cost effective options for providing the necessary data in real time are not available. Distribution Provider will report to the Commission or designated authority, on a quarterly basis, the rationale for requiring Telemetering equipment in each instance along with the size and location of the facility.

**6. LOCATION**

Where Distribution Provider-owned Metering is located on Producer's premises, Producer shall provide, at no expense to Distribution Provider, a suitable location for all such Metering Equipment.

(N)

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**J. METERING, MONITORING AND TELEMETERING (Cont'd.)**

(N)

**7. COSTS OF METERING**

Producer will bear all costs of the Metering required by this Rule, including the incremental costs of operating and maintaining the Metering Equipment.

**8. MULTIPLE TARIFF METERING**

The requirements of Section J.3 may not apply where a Generating Facility includes multiple generators eligible for service under more than one Net Energy Metering (NEM) tariff schedule (e.g. NEM, BG-NEM, FC-NEM), or where a Generating Facility consists of one or more NEM-eligible generators in combination with one or more non-NEM eligible generators without Non-Export relays ("Reverse Power Protection"). To ensure proper tariff administration, metering will be required at the PCC and at each of the NEM eligible generator groups eligible for service under the same NEM tariff schedule. For combinations of multiple NEM eligible generators under different tariffs, billing administration and metering requirements will be as specified in the appropriate NEM tariff schedule.

Where a Generating Facility consists of one or more NEM eligible generator groups in combination with one or more non-NEM generators, metering of the non-NEM generators is not required, except as specified in Section J.3.

(N)

(Continued)

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**K. DISPUTE RESOLUTION PROCESS**

(N)

In addition to the informal procedures for timeline-related disputes set out in Section F.1.d, the following procedures will apply for disputes arising from this Rule:

**1. SCOPE**

The Commission shall have initial jurisdiction to interpret, add, delete or modify any provision of this Rule or of any agreements entered into between Distribution Provider and Applicant or Producer to implement this tariff ("Implementing Agreements") and to resolve disputes regarding Distribution Provider's performance of its obligations under Commission-jurisdictional tariffs, the applicable agreements, and requirements related to the interconnection of Applicant's or Producer's Generating Facility or Interconnection Facilities pursuant to this Rule.

**2. PROCEDURES**

Any dispute arising between Distribution Provider and Producer (individually referred to in Section K as "Party" and collectively "the Parties") regarding Distribution Provider's or Producer's performance of its obligations under its tariffs, the Implementing Agreements, and requirements related to the interconnection of Producer's Facilities pursuant to this Rule shall be resolved according to the following procedures:

- a. The dispute shall be documented in a written notice ("notice") by the aggrieved Party to the other Party containing the relevant known facts pertaining to the dispute, the specific dispute and the relief sought, and express notice by the aggrieved Party that it is invoking the procedures under this Section. The notice shall be sent to the Party's email address and physical address set forth in the Generator Interconnection Agreement or Interconnection Request, if there is no Generator Interconnection Agreement. A copy of the notice shall also be sent to the Energy Division, Office of the Director, at the Commission. The receiving Party shall acknowledge the notice within five (5) Calendar Days of its receipt.

(N)

(Continued)

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**K. DISPUTE RESOLUTION PROCESS (Cont'd.)**

(N)

**2. PROCEDURES (Cont'd.)**

- a Upon the aggrieved Party notifying the other Party of the dispute, each Party must designate a representative with the authority to make decisions for its respective Party to review the dispute within seven (7) Calendar Days. In addition, upon receipt of the notice, Distribution Provider shall provide the aggrieved Party with all relevant regulatory and/or technical details and analysis regarding any Distribution Provider interconnection requirements under dispute within twenty-one (21) Calendar Days.

Within forty-five (45) Calendar Days of the date of the notice, the Parties' authorized representatives will be required to meet and confer to try to resolve the dispute. Parties are expected to operate in good faith and use best efforts to resolve the dispute.

- b. If a resolution is not reached in forty-five (45) Calendar Days from the date of the notice, either 1) a Party may request to continue negotiations for an additional forty-five (45) Calendar Days or 2) the Parties may by mutual agreement make a written request for mediation to the ADR Coordinator in the Commission's ALJ Division. The request may be submitted by electronic mail to [adr\\_program@cpuc.ca.gov](mailto:adr_program@cpuc.ca.gov). Alternatively, both Parties by mutual agreement may request mediation from an outside third-party mediator with costs to be shared equally between the Parties.
- c. At any time, either Party may file a formal complaint before the Commission pursuant to California PUC section 1702 and Article 4 of the Commission's Rules of Practice and Procedure.

Nothing in this section shall be construed to limit the rights of any Party to exercise rights and remedies under Commission law.

(N)

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**K. DISPUTE RESOLUTION PROCESS (Cont'd.)**

(N)

**3. PERFORMANCE DURING DISPUTE**

Pending resolution of any dispute under this Section, the Parties shall proceed diligently with the performance of their respective obligations under this Rule except as described in Section F.6 and the Implementing Agreements, unless the Implementing Agreements have been terminated. Disputes as to the Interconnection Request and implementation of this Section shall be subject to resolution pursuant to the procedures set forth in this Section.

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**L. CERTIFICATION AND TESTING CRITERIA**

**1. INTRODUCTION**

This Section describes the test procedures and requirements for equipment used for the Interconnection of Generating Facilities to Distribution Provider's Distribution or Transmission System. -Included are Type Testing, Production Testing, Commissioning Testing, and Periodic Testing. -The procedures listed rely heavily on those described in appropriate Underwriters Laboratory (UL), Institute of Electrical and Electronic Engineers (IEEE), and International Electrotechnical Commission (IEC) documents—most notably UL 1741 and IEEE 929 as well as the testing described in *May 1999 New York State Public Service Commission's Interconnection Requirements*.- As noted in Section B, this Rule has been revised to be consistent with ANSI/IEEE 1547-2003 Standard for Interconnecting Distribution Resources with Electric Power Systems.

(N)

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**L. CERTIFICATION AND TESTING CRITERIA (Cont'd.)**

(N)

**1. INTRODUCTION (Cont'd.)**

The tests described here, together with the technical requirements in Section H of this Rule, are intended to provide assurance that the Generating Facility's equipment will not adversely affect Distribution Provider's Distribution or Transmission System and that a Generating Facility will cease providing power to Distribution Provider's Distribution or Transmission System under abnormal conditions. The tests were developed assuming a low level of Generating Facility penetration or number of connections to Distribution Provider's Distribution or Transmission System. At high levels of Generating Facility penetration, additional requirements and corresponding test procedures may need to be defined.

Section L also provides criteria for "Certifying" Generators or inverters. Once a Generator or inverter has been Certified per this Rule, it may be considered suitable for Interconnection with Distribution Provider's Distribution or Transmission System. Subject to the exceptions described in Section L, Distribution Provider will not repeat the design review or require retesting of such Certified Equipment. It should be noted that the Certification process is intended to facilitate Generating Facilities Interconnections. Certification is not a prerequisite to interconnect a Generating Facility.

The revisions made to this Rule relative to IEEE 1547-2003 has resulted in changes in set points, test criteria, test procedures, and other requirements that will impact previously certified or listed equipment as well as equipment currently under evaluation. These changes were made to provide consistency with IEEE 1547. Equipment that is certified or that has been submitted to a NRTL for testing prior to the adoption of the revised Underwriters Laboratories (UL) 1741 standard titled "Inverters, Converters, Controllers and Interconnection Systems Equipment for use with Distributed Energy Resources" and that subsequently meets the previous Rule 21 certification requirements will continue to be accepted as Certified Equipment for Interconnection Requests submitted through May 7, 2007, the effective date of the revised "UL 1741."

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**L. CERTIFICATION AND TESTING CRITERIA (Cont'd.)**

(N)

**2. CERTIFIED AND NON-CERTIFIED INTERCONNECTION EQUIPMENT**

**a. Certified Equipment**

Equipment tested and approved (i.e. "Listed") by an accredited NRTL as having met both the Type Testing and Production Testing requirements described in this document is considered to be Certified Equipment for purposes of Interconnection with Distribution Provider's Distribution or Transmission System. Certification may apply to either a pre-packaged system or an assembly of components that address the necessary functions. Type Testing may be done in the manufacturer's factory or test laboratory, or in the field. At the discretion of the testing laboratory, field-certification may apply only to the particular installation tested. In such cases, some or all of the tests may need to be repeated at other installations.

When equipment is Certified by a NRTL, the NRTL shall provide to the manufacturer, at a minimum, a Certificate with the following information for each device:

**Administrative:**

- (1) The effective date of Certification or applicable serial number (range or first in series), and/or other proof that certification is current;
- (2) Equipment model number(s) of the Certified equipment;
- (3) The software version utilized in the equipment, if applicable;
- (4) Test procedures specified (including date or revision number); and
- (5) Laboratory accreditation (by whom and to what standard).

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**L. CERTIFICATION AND TESTING CRITERIA (Cont'd.)**

(N)

**2. CERTIFIED AND NON-CERTIFIED INTERCONNECTION EQUIPMENT (Cont'd.)**

**a. Certified Equipment (Cont'd.)**

Technical (As appropriate):

- (1) Device ratings (kW, kV, Volts, amps, etc.);
- (2) Maximum available fault current in amps;
- (3) In-rush Current in amps;
- (4) Trip points, if factory set (trip value and timing);
- (5) Trip point and timing ranges for adjustable settings;
- (6) Nominal power factor or range if adjustable;
- (7) If the equipment is Certified as Non-Exporting and the method used (reverse power or underpower); and
- (8) If the equipment is Certified as Non-Islanding

It is the responsibility of the equipment manufacturer to ensure that Certification information is made publicly available by the manufacturer, the testing laboratory, or by a third party.

**b. Non-Certified Equipment**

For non-Certified equipment, some or all of the tests described in this Rule may be required by Distribution Provider for each Generating and/or Interconnection Facility. The manufacturer or a laboratory acceptable to Distribution Provider may perform these tests. Test results for non-Certified equipment must be submitted to Distribution Provider for the Supplemental Review. Approval by Distribution Provider for equipment used in a particular Generating and/or Interconnection Facility does not guarantee Distribution Provider's approval for use in other Generating and/or Interconnection Facilities.

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**L. CERTIFICATION AND TESTING CRITERIA (Cont'd.)**

(N)

**3. TYPE TESTING**

**a. Type Tests and Criteria for Interconnection Equipment Certification**

Type testing provides a basis for determining that equipment meets the specifications for being designated as Certified equipment under this Rule. The requirements described in this Section cover only issues related to Interconnection and are not intended to address device safety or other issues.

Table L.1 defines the test criteria by Generator or inverter technology. While UL 1741(1) was written specifically for inverters, the requirements are readily adaptable to synchronous Generators, induction Generators, as well as single/multi-function controllers and protection relays. Until a universal test standard is developed, Distribution Provider or NRTL shall adapt the procedures referenced in Table L.1 as appropriate and necessary for a Generating Facility and/or Interconnection Facilities or associated equipment performance and its control and Protection Functions. These tests shall be performed in the sequence shown in Table JL.2 on the next page.

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## L. CERTIFICATION AND TESTING CRITERIA (Cont'd.)

(N)

## 3. TYPE TESTING (Cont'd.)

## a. Type Tests and Criteria for Interconnection Equipment Certification (Cont'd.)

**Table L.1****Type Test and Requirements for Interconnection Equipment Certification**

Type Test	Reference (1)	Inverter	Synchronous Generator	Induction Generator
Distribution Provider Interaction	UL 1741 – 39	X	X	X
DC Isolation	UL 1741 – 40.1	X	—	—
Simulated PV Array (Input) Requirements	UL 1741 – 41.2	X	—	—
Dielectric Voltage Withstand	UL 1741 – 44	X	X	X
Power Factor	UL 1741 – 45.2.2	X	X	X
Harmonic Distortion	UL 1741 – 45.4	X	X	X
DC Injection	UL 1741 – 45.5	X	—	—
Distribution Provider Voltage and Frequency Variation	UL 1741 – 46.2	X	X	X
Reset Delay	UL 1741 – 46.2.3	X	X	X
Loss of Control Circuit	UL 1741 – 46.4	X	X	X
Short Circuit	UL 1741 – 47.3	X	X	X
Load Transfer	UL 1741 – 47.7	X	X	X
Surge Withstand Capability	[L.3.e	X	X	X
Anti-Islanding	L.3.b	(2)	(2)	(2)
Non-Export	L.3.c	(3)	(3)	(3)
In-rush Current	L.3.d	(4)	(4)	(4)
Synchronization	L.3.f	(5)	X	(5)

Table Notes: (1) References are to section numbers in either UL 1741 (Inverters, Converters and Charge Controllers for Use in Independent Power Systems) or this Rule. References in UL 1741 to "photovoltaics" or "inverter" may have to be adapted to the other technologies by the testing laboratory to appropriately apply in the tests to other technologies.  
(2) Required only if Non-Islanding designation.  
(3) Required only if Non-Export designation is desired.  
(4) Required for Generators that use Distribution Provider power to motor to speed.  
(5) Required for all self-excited induction Generators as well as Inverters that operate as voltage sources when connected to Distribution Provider's Distribution or Transmission System.  
X = Required  
- = Not Required

(N)

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L. CERTIFICATION AND TESTING CRITERIA (Cont'd.)

(N)

3. TYPE TESTING (Cont'd.)

a. Type Tests and Criteria for Interconnection Equipment Certification (Cont'd.)

Table L.2 Type Tests Sequence for Interconnection Equipment Certification

<u>Test No.</u>	<u>Type Test</u>
1	Distribution Provider Voltage and Frequency Variation
2	Synchronization
3	Surge Withstand Capability
4	Distribution Provider Voltage and Frequency Variation
5	Synchronization
6	Other Required and Optional Tests

Tests 1, 2, and 3 must be done first and in the order shown. Tests 4 and on follow in order convenient to the test agency.

b. Anti-Islanding Test

Devices that pass the Anti-Islanding test procedure described in UL 1741 Section 46.3 will be considered Non-Islanding for the purposes of these Interconnection requirements. The test is required only for devices for which a Certified Non-Islanding designation is desired.

c. Non-Export Test

Equipment that passes the Non-Export test procedure described in Section L.7.a will be considered Non-Exporting for the purposes of these Interconnection requirements. This test is required only for devices for which a Certified Non-Export designation is desired.

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**L. CERTIFICATION AND TESTING CRITERIA (Cont'd.)**

(N)

**3. TYPE TESTING (Cont'd.)**

**d. In-rush Current Test**

Generation equipment that utilizes Distribution Provider power to motor up to speed will be tested using the procedure defined in Section L.7.b to determine the maximum current drawn during this startup process. The resulting In-rush Current is used to estimate the Starting Voltage Drop.

**e. Surge Withstand Capability Test**

The interconnection equipment shall be tested for the surge withstand requirement in Section H.1.c in all normal operating modes in accordance with IEEE Std C62.45-2002 for equipment rates less than 1000 V to confirm that the surge withstand capability is met by using the selected test level(s) from IEEE Std C62.41.2-2002. Interconnection equipment rated greater than 1000 V shall be tested in accordance with manufacturer or system integrator designated applicable standards. For interconnection equipment signal and control circuits, use IEEE Std C37.90.1-2002. These tests shall confirm the equipment did not fail, did not misoperate, and did not provide misinformation (IEEE 1547-5.1.3.2).

The location/exposure category for which the equipment has been tested shall be clearly marked on the equipment label or in the equipment documentation. External surge protection may be used to protect the equipment in harsher location/exposure categories.

(N)

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Sheet 165

**L. CERTIFICATION AND TESTING CRITERIA (Cont'd.)**

(N)

**3. TYPE TESTING (Cont'd.)**

**f. Synchronization Test**

This test is applied to synchronous Generators, self-excited induction generators, and inverters capable of operating as voltage-source while connected to Distribution Provider's Distribution or Transmission System. The test is also applied to the resynchronization Function (transition from stand-alone to parallel operation) on equipment that provides such functionality. This test may not need to be performed on both the synchronization and re-synchronization functions if the manufacturers can verify to the satisfaction of the testing organization that monitoring and controls hardware and software are common to both functions. This test is not necessary for induction generators or current-source inverters. Instead, the In-rush Current test Section L.3.d shall be applied to those generators.

This test shall demonstrate that at the moment of the paralleling-device closure, all three synchronization parameters in Table L.3 are within the stated limits. This test shall also demonstrate that if any of the parameters are outside of the limits stated in the table, the paralleling-device shall not close (IEEE 1547-5.1.2A). The test will start with only one of the three parameters: (1) voltage difference between Generating Facility and Distribution Provider's Distribution or Transmission System; (2) frequency difference; or (3) phase angle outside of the synchronization specification. Verify that the Generating Facility is brought within specification prior to synchronization. Repeat the test five times for each of the three parameters. For manual synchronization with synch check or manual control with auto synchronization, the test must verify that paralleling does not occur until the parameters are brought within specifications.

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**L. CERTIFICATION AND TESTING CRITERIA (Cont'd.)**

(N)

**3. TYPE TESTING (Cont'd.)**

**f. Synchronization Test (Cont'd.)**

**Table L.3**  
**Synchronization Parameter Limits [1]**

Aggregate Rating of Generator Units (kVA)	Frequency Difference (Δf, Hz)	Voltage Difference (ΔV, %)	Phase Angle Difference (ΔΦ, °)
0-500	0.3	10	20
> 500-1,500	0.2	5	15
> 1,500-10,000	0.1	3	10

[1] – IEEE 1547-5.1.1B

**g. Paralleling Device Withstand Test**

The di-electric voltage withstand test specified in Section L.1 shall be performed on the paralleling device to ensure compliance with those requirements specified in Section H.1.c (IEEE 1547-5.1.3.3).

**4. PRODUCTION TESTING**

At a minimum, each interconnection system shall be subjected to Distribution Provider Voltage and Frequency Variation Test procedure described in UL1741 under Manufacturing and Production Tests, Section 68 and the Synchronization test specified in Section L.3.f. Interconnection systems with adjustable set points shall be tested at a single set of set points as specified by the manufacturer. This test may be performed in the factory or as part of a Commissioning Test (Section L.5).

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Sheet 167

**L. CERTIFICATION AND TESTING CRITERIA (Cont'd.)**

(N)

**5. COMMISSIONING TESTING**

**a. Commissioning Testing**

Commissioning Testing, where required, will be performed on-site to verify protective settings and functionality. Upon initial Parallel Operation of a Generating Facility, or any time interface hardware or software is changed that may affect the functions listed below, a Commissioning Test must be performed. An individual qualified in testing protective equipment (professional engineer, factory-certified technician, or licensed electrician with experience in testing protective equipment) must perform Commissioning Testing in accordance with the manufacturer's recommended test procedure to verify the settings and requirements per this Rule.

Distribution Provider may require written Commissioning test procedure be submitted to Distribution Provider at least 10 working days prior to the performance of the Commissioning Test. Distribution Provider has the right to witness Commissioning Test. Distribution Provider may also require written certification by the installer describing which tests were performed and their results. Protective Functions to be tested during commissioning, particularly with respect to non-Certified equipment, may consist of the following:

- (1) Over and under voltage
- (2) Over and under frequency
- (3) Anti-Islanding function (if applicable)
- (4) Non-Exporting function (if applicable)
- (5) Inability to energize dead line

(N)

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L. CERTIFICATION AND TESTING CRITERIA (Cont'd.)

(N)

5. COMMISSIONING TESTING (Cont'd.)

a. Commissioning Testing (Cont'd.)

- (6) Time delay on restart after Distribution Provider source is stable
- (7) Distribution Provider system fault detection (if used)
- (8) Synchronizing controls (if applicable)
- (9) Other Interconnection Protective Functions that may be required as part of the Generator Interconnection Agreement

Commissioning Test shall include visual inspections of the interconnection equipment and protective settings to confirm compliance with the interconnection requirements.

b. Review, Study, and Additional Commissioning Test Verification Costs

A Producer shall be responsible for the reasonably incurred costs of the reviews, studies and additional Commissioning Test verifications conducted pursuant to Section E of this Rule. If the initial Commissioning Test verification is not successful through no fault of Distribution Provider, Distribution Provider may impose upon Producer a cost based charge for subsequent Commissioning Test verifications. All Costs for additional Commissioning Test verifications shall be paid by Producer within thirty days of receipt of Distribution Provider's invoice. The invoice provided by Distribution Provider shall consist of the hourly rate multiplied by the hours incurred by Distribution Provider and will separately specify the amount of time spent on-site from that spent in roundtrip travel to the Commissioning Test site. Additional cost, if any, will be specified on the invoice. If the initial Commissioning Test verification is not successful through the fault of Distribution Provider, that visit will not be considered the initial Commissioning Test verification.

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32022-E

**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 169

**L. CERTIFICATION AND TESTING CRITERIA (Cont'd.)**

(N)

**5. COMMISSIONING TESTING (Cont'd.)**

**c. Other Checks and Tests**

Other checks and tests that may need to be performed include:

- (1) Verifying final Protective Function settings
- (2) Trip test (L.5.g)
- (3) In-service tests (L.5.h)

**d. Certified Equipment**

Generating Facilities qualifying for interconnection through the Fast Track process incorporate Certified Equipment that have, at a minimum, passed the Type Tests and Production Tests described in this Rule and are judged to have little or no potential impact on Distribution Provider's Distribution or Transmission System. For such Generating Facilities, it is necessary to perform only the following tests:

- (1) Protective Function settings that have been changed after Production Testing will require field verification. Tests shall be performed using injected secondary frequencies, voltages and currents, applied waveforms, at a test connection using a Generator to simulate abnormal Distribution Provider voltage or frequency, or varying the set points to show that the device trips at the measured (actual) Distribution Provider voltage or frequency.
- (2) The Non-Islanding function shall be checked by operating a load break disconnect switch to verify the Interconnection equipment ceases to energize Distribution Provider's Distribution or Transmission System and does not re-energize it for the required time delay after the switch is closed.
- (3) The Non-Exporting function shall be checked using secondary injection techniques. This function may also be tested by adjusting the Generating Facility output and local loads to verify that the applicable Non-Exporting criteria (i.e., reverse power or underpower) are met.

(N)

(Continued)

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Sheet 170

**L. CERTIFICATION AND TESTING CRITERIA (Cont'd.)**

(N)

**5. COMMISSIONING TESTING (Cont'd.)**

**d. Certified Equipment (Cont'd.)**

The Supplemental Review or an Interconnection Study may impose additional components or additional testing.

**e. Non-Certified Equipment**

Non-certified Equipment shall be subjected to the appropriate tests described in Type Testing (Section L.3) as well as those described in Certified Equipment Commissioning Tests (Section L.5.d). With Distribution Provider's approval, these tests may be performed in the factory, in the field as part of commissioning, or a combination of both. Distribution Provider, at its discretion, may also approve a reduced set of tests for a particular Generating Facility or, for example, if it determines it has sufficient experience with the equipment.

**f. Verification of Settings**

At the completion of Commission testing, Producer shall confirm all devices are set to Distribution Provider-approved settings. Verification shall be documented in the Commissioning Test Certification.

**g. Trip Tests**

Interconnection Protective Functions and devices (e.g. reverse power relays) that have not previously been tested as part of the Interconnection Facilities with their associated interrupting devices (e.g. contactor or circuit breaker) shall be trip tested during commissioning. The trip test shall be adequate to prove that the associated interrupting devices open when the protective devices operate. Interlocking circuits between Protective Function devices or between interrupting devices shall be similarly tested unless they are part of a system that has been tested and approved during manufacturing.

(N)

(Continued)

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Sheet 171

**L. CERTIFICATION AND TESTING CRITERIA (Cont'd.)**

(N)

**5. COMMISSIONING TESTING (Cont'd.)**

**g. Trip Tests**

Interconnection Protective Functions and devices (e.g. reverse power relays) that have not previously been tested as part of the Interconnection Facilities with their associated interrupting devices (e.g. contactor or circuit breaker) shall be trip tested during commissioning. The trip test shall be adequate to prove that the associated interrupting devices open when the protective devices operate. Interlocking circuits between Protective Function devices or between interrupting devices shall be similarly tested unless they are part of a system that has been tested and approved during manufacturing.

**h. In-service Tests**

Interconnection Protective Functions and devices that have not previously been tested as part of the Interconnection Facilities with their associated instrument transformers or that are wired in the field shall be given an in-service test during commissioning. This test will verify proper wiring, polarity, CT/PT ratios, and proper operation of the measuring circuits. The in-service test shall be made with the power system energized and carrying a known level of current. A measurement shall be made of the magnitude and phase angle of each Alternating Current (AC) voltage and current connected to the protective device and the results compared to expected values. For protective devices with built-in Metering Functions that report current and voltage magnitudes and phase angles, or magnitudes of current, voltage, and real and reactive power, the metered values may be used for in-service testing. Otherwise, portable ammeters, voltmeters, and phase-angle meters shall be used.

(N)

(Continued)

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**GENERATING FACILITY INTERCONNECTIONS**

Sheet 172

**L. CERTIFICATION AND TESTING CRITERIA (Cont'd.)**

(N)

**6. PERIODIC TESTING**

Periodic Testing of Interconnection-related Protective Functions shall be performed as specified by the manufacturer, or at least every four years. All Periodic Tests prescribed by the manufacturer shall be performed. Producer shall maintain Periodic Test reports or a log for inspection by Distribution Provider. Periodic Testing conforming to Distribution Provider test intervals for the particular Line Section may be specified by Distribution Provider under special circumstances, such as high fire hazard areas. Batteries used to activate any Protective Function shall be checked and logged once per month for proper voltage. Once every four years, the battery must be either replaced or a discharge test performed.

**7. TYPE TESTING PROCEDURES NOT DEFINED IN OTHER STANDARDS**

This Section describes the additional Type Tests necessary to qualify a device as Certified under this Rule. These Type Tests are not contained in Underwriters Laboratories UL 1741 Standard *Inverters, Converters and Controllers for Use in Independent Power Systems*, or other referenced standards.

**a. Non-Exporting Test Procedures**

The Non-Exporting test is intended to verify the operation of relays, controllers and inverters designed to limit the export of power and certify the equipment as meeting the requirements of Screen I, Options 1 and 2, of the review process. Tests are provided for discrete relay packages and for controllers and inverters with the intended Functions integrated.

(N)

(Continued)

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GENERATING FACILITY INTERCONNECTIONS

Sheet 173

L. CERTIFICATION AND TESTING CRITERIA (Cont'd.)

(N)

7. TYPE TESTING PROCEDURES NOT DEFINED IN OTHER STANDARDS  
(Cont'd.)

a. Non-Exporting Test Procedures (Cont'd.)

i) Discrete Reverse Power Relay Test

This version of the Non-Exporting test procedure is intended for discrete reverse power and underpower relay packages provided to meet the requirements of Options 1 and 2 of Screen I. It should be understood that in the reverse power application, the relay will provide a trip output with power flowing in the export (toward Distribution Provider's Distribution or Transmission System) direction.

Step 1: Power Flow Test at Minimum, Midpoint and Maximum Pickup Level Settings

Determine the corresponding secondary pickup current for the desired export power flow of 0.5 secondary watts (the minimum pickup setting, assumes 5 amp and 120V CT/PT secondary). Apply nominal voltage with minimum current setting at zero (0) degrees phase angle in the trip direction. Increase the current to pickup level. Observe the relay's (LCD or computer display) indication of power values. Note the indicated power level at which the relay trips. The power indication should be within 2% of the expected power. For relays with adjustable settings, repeat this test at the midpoint, and maximum settings. -Repeat at phase angles of 90, 180 and 270 degrees and verify that the relay does not operate (measured watts will be zero or negative).

(N)

(Continued)

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Sheet 174

**L. CERTIFICATION AND TESTING CRITERIA (Cont'd.)**

(N)

**7. TYPE TESTING PROCEDURES NOT DEFINED IN OTHER STANDARDS (Cont'd.)**

**a. Non-Exporting Test Procedures (Cont'd.)**

**i) Discrete Reverse Power Relay Test (Cont'd.)**

**Step 2: Leading Power Factor Test**

Apply rated voltage with a minimum pickup current setting (calculated value for system application) and apply a leading power factor load current in the non-trip direction (current lagging voltage by 135 degrees). Increase the current to relay rated current and verify that the relay does not operate. For relays with adjustable settings, this test should be repeated at the minimum, midpoint, and maximum settings.

**Step 3: Minimum Power Factor Test**

At nominal voltage and with the minimum pickup (or ranges) determined in Step 1, adjust the current phase angle to 84 or 276 degrees. Increase the current level to pickup (about 10 times higher than at 0 degrees) and verify that the relay operates. Repeat for phase angles of 90, 180 and 270 degrees and verify that the relay does not operate.

**Step 4: Negative Sequence Voltage Test**

Using the pickup settings determined in Step 1, apply rated relay voltage and current at 180 degrees from tripping direction, to simulate normal load conditions (for three-phase relays, use Ia at 180, Ib at 60 and Ic at 300 degrees). Remove phase-1 voltage and observe that the relay does not operate. Repeat for phases-2 and 3.

(N)

(Continued)

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Sheet 175

L. CERTIFICATION AND TESTING CRITERIA (Cont'd.)

(N)

7. TYPE TESTING PROCEDURES NOT DEFINED IN OTHER STANDARDS  
(Cont'd.)

a. Non-Exporting Test Procedures (Cont'd.)

i) Discrete Reverse Power Relay Test (Cont'd.)

Step 5: Load Current Test

Using the pickup settings determined in Step 1, apply rated voltage and current at 180 degrees from the tripping direction, to simulate normal load conditions (use Ia at 180, Ib at 300 and Ic at 60 degrees). Observe that the relay does not operate.

Step 6: Unbalanced Fault Test

Using the pickup settings determined in Step 1, apply rated voltage and 2 times rated current, to simulate an unbalanced fault in the non-trip direction (use Va at 0 degrees, Vb and Vc at 180 degrees, Ia at 180 degrees, Ib at 0 degrees, and Ic at 180 degrees). Observe that the relay, especially single phase, does operate properly.

Step 7: Time Delay Settings Test

Apply Step 1 settings and set time delay to minimum setting. Adjust the current source to the appropriate level to determine operating time, and compare against calculated values. Verify that the timer stops when the relay trips. Repeat at midpoint and maximum delay settings.

(N)

(Continued)

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GENERATING FACILITY INTERCONNECTIONS

Sheet 176

L. CERTIFICATION AND TESTING CRITERIA (Cont'd.)

(N)

7. TYPE TESTING PROCEDURES NOT DEFINED IN OTHER STANDARDS  
(Cont'd.)

a. Non-Exporting Test Procedures (Cont'd.)

i) Discrete Reverse Power Relay Test (Cont'd.)

Step 8: Dielectric Test

Perform the test described in IEC 414 using 2 kV RMS for 1 minute.

Step 9: Surge Withstand Test

Perform the surge withstand test described in IEEE C37.90.1.1989 or the surge withstand capability test described in L.3.e.

ii) Discrete Underpower Relay Test

This version of the Non-Exporting test procedure is intended for discrete underpower relay packages and meets the requirements of Option 2 of Screen I. A trip output will be provided when import power (toward Producer's load) drops below the specified level.

Note: For an underpower relay, pickup is defined as the highest power level at which the relay indicates that the power is less than the set level.

(N)

(Continued)

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Sheet 177

L. CERTIFICATION AND TESTING CRITERIA (Cont'd.)

(N)

7. TYPE TESTING PROCEDURES NOT DEFINED IN OTHER STANDARDS  
(Cont'd.)

a. Non-Exporting Test Procedures (Cont'd.)

ii) Discrete Underpower Relay Test (Cont'd.)

Step 1: Power Flow Test at Minimum, Midpoint and Maximum  
Pickup Level Settings

Determine the corresponding secondary pickup current for the  
desired power flow pickup level of 5% of peak load minimum  
pickup setting. Apply rated voltage and current at 0 (zero)  
degrees phase angle in the direction of normal load current.

Decrease the current to pickup level. Observe the relay's (LCD or  
computer display) indication of power values. Note the indicated  
power level at which the relay trips. The power indication should  
be within 2% of the expected power. For relays with adjustable  
settings, repeat the test at the midpoint, and maximum settings.  
Repeat at phase angles of 90, 180 and 270 degrees and verify  
that the relay operates (measured watts will be zero or negative).

Step 2: Leading Power Factor Test

Using the pickup current setting determined in Step 1, apply rated  
voltage and rated leading power factor load current in the normal  
load direction (current leading voltage by 45 degrees). Decrease  
the current to 145% of the pickup level determined in Step 1 and  
verify that the relay does not operate. For relays with adjustable  
settings, repeat the test at the minimum, midpoint, and maximum  
settings.

(N)

(Continued)

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**GENERATING FACILITY INTERCONNECTIONS**

Sheet 178

**L. CERTIFICATION AND TESTING CRITERIA (Cont'd.)**

(N)

**7. TYPE TESTING PROCEDURES NOT DEFINED IN OTHER STANDARDS (Cont'd.)**

**a. Non-Exporting Test Procedures (Cont'd.)**

**ii) Discrete Underpower Relay Test (Cont'd.)**

**Step 3: Minimum Power Factor Test**

At nominal voltage and with the minimum pickup (or ranges) determined in Step 1, adjust the current phase angle to 84 or 276 degrees. Decrease the current level to pickup (about 10% of the value at 0 degrees) and verify that the relay operates. Repeat for phase angles 90, 180 and 270 degrees and verify that the relay operates for any current less than rated current.

**Step 4: Negative Sequence Voltage Test**

Using the pickup settings determined in Step 1, apply rated relay voltage and 25% of rated current in the normal load direction, to simulate light load conditions. Remove phase 1 voltage and observe that the relay does not operate. Repeat for Phases-2 and 3.

**Step 5: Unbalanced Fault Test**

Using the pickup settings determined in Step 1, apply rated voltage and two times rated current, to simulate an unbalanced fault in the normal load direction (use Va at 0 degrees, Vb and Vc at 180 degrees, Ia at 0 degrees, Ib at 180 degrees, and Ic at 0 degrees). Observe that the relay (especially single-phase types) operates properly.

**Step 6: Time Delay Settings Test**

Apply Step 1 settings and set time delay to minimum setting. Adjust the current source to the appropriate level to determine operating time, and compare against calculated values. Verify that the timer stops when the relay trips. Repeat at midpoint and maximum delay settings.

(N)

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Sheet 179

L. CERTIFICATION AND TESTING CRITERIA (Cont'd.)

(N)

7. TYPE TESTING PROCEDURES NOT DEFINED IN OTHER STANDARDS  
(Cont'd.)

a. Non-Exporting Test Procedures (Cont'd.)

ii) Discrete Underpower Relay Test (Cont'd.)

Step 7: Dielectric Test

Perform the test described in IEC 414 using 2 kV RMS for 1 minute.

Step 8: Surge Withstand Test

Perform the surge withstand test described in IEEE C37.90.1.1989 or the surge withstand test described in Section L.3.e.

iii) Tests for Inverters and Controllers with Integrated Functions

Inverters and controllers designed to provide reverse or underpower functions shall be tested to certify the intended operation of this function. Two methods are acceptable:

Method 1: If the inverter or controller utilizes external current/voltage measurement to determine the reverse or underpower condition, then the inverter or controller shall be functionally tested by application of appropriate secondary currents and potentials as described in the Discrete Reverse Power Relay Test, Section L.7.a.i of this Rule.

(N)

(Continued)

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**ELECTRIC RULE NO. 21**  
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Sheet 180

**L. CERTIFICATION AND TESTING CRITERIA (Cont'd.)**

(N)

**7. TYPE TESTING PROCEDURES NOT DEFINED IN OTHER STANDARDS  
(Cont'd.)**

**a. Non-Exporting Test Procedures (Cont'd.)**

**iii) Tests for Inverters and Controllers with Integrated Functions  
(Cont'd.)**

Inverters and controllers designed to provide reverse or underpower functions shall be tested to certify the intended operation of this function. Two methods are acceptable:

Method 1: If the inverter or controller utilizes external current/voltage measurement to determine the reverse or underpower condition, then the inverter or controller shall be functionally tested by application of appropriate secondary currents and potentials as described in the Discrete Reverse Power Relay Test, Section L.7.a.i of this Rule.

Method 2: If external secondary current or voltage signals are not used, then unit-specific tests must be conducted to verify that power cannot be exported across the PCC for a period exceeding two seconds. These may be factory tests, if the measurement and control points are integral to the unit, or they may be performed in the field.

**b. In-rush Current Test Procedures**

This test will determine the maximum In-rush Current drawn by the Generator.

**(1) Locked-Rotor Method**

Use the test procedure defined in NEMA MG-1 (manufacturer's data is acceptable if available).

(N)

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**L. CERTIFICATION AND TESTING CRITERIA (Cont'd.)**

(N)

**7. TYPE TESTING PROCEDURES NOT DEFINED IN OTHER STANDARDS**  
**(Cont'd.)**

**b. In-rush Current Test Procedures (Cont'd.)**

**(2) Start-up Method**

Install and setup the Generating Facility equipment as specified by the manufacturer. Using a calibrated oscilloscope or data acquisition equipment with appropriate speed and accuracy, measure the current draw at the Point of Interconnection as the Generating Facility starts up and parallels with Distribution Provider's Distribution or Transmission System. Startup shall follow the normal, manufacturer-specified procedure. Sufficient time and current resolution and accuracy shall be used to capture the maximum current draw within 5%. In-rush Current is defined as the maximum current draw from Distribution Provider during the startup process, using a 10-cycle moving average. During the test, Distribution Provider source, real or simulated, must be capable of maintaining voltage within +/- 5% of rated at the connection to the unit under test. Repeat this test five times. Report the highest 10-cycle current as the In-rush Current. A graphical representation of the time-current characteristic along with the certified In-rush Current must be included in the test report and made available to Distribution Provider.

(N)

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**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 182

## M. APPENDIX ONE

(N)

## Inadvertent Export

Inadvertent Export: "The unscheduled and uncompensated export of real power from a Generating Facility (GF) for a duration exceeding two seconds but less than 60 seconds."

Under certain operating conditions, an Applicant may choose to completely offset their facility load by installing generation systems which are optimally sized to meet their peak demand with load following functionality on the Generator controls to ensure conditional export of electrical power from the Generating Facility to Distribution Provider's Distribution or Transmission System. In situations where the loading changes rapidly and/or the Generator cannot ramp down quickly enough, the Generating Facility may need to export small amounts of power for limited duration. The event of exporting uncompensated power for a short time is referred to as Inadvertent Export.

It is proposed that the following criteria be the minimum requirements for Inadvertent Export systems. It should be understood that other factors relevant to the interconnection study process (15% screen results, short circuit current ratio, etc.) may necessitate additional technical requirements (e.g. reclose block, transfer trip, ground bank, etc.) that are not explicitly noted here. Also, it should be noted that Inadvertent Export may not be available for interconnections to Networked Secondary Systems.

- 1) If a Generating Facility is proposed with Inadvertent Export, additional Protective Functions and equipment to detect Distribution or Transmission System faults (per Distribution Provider's standard practices) may be required over and above the basic Protective Functions and equipment associated with the four options in the Export Screen. Protective Functions may include, but are not limited to, directional overcurrent/voltage-restraint overcurrent Protective Functions for line-to-line fault detection and overcurrent/overvoltage Protective Functions for line-to-ground detection. The addition of a ground bank or ground detector may also be necessary.

(N)

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**GENERATING FACILITY INTERCONNECTIONS**

Sheet 183

## M. APPENDIX ONE (Cont'd.)

(N)

- 2) The effect on equipment ratings can be mitigated by limiting the amount of inadvertent export allowed. To a large degree, Voltage Regulation may be similarly handled. The amount of Inadvertent Export is dependent on specific Distribution Provider requirements and should be limited to the lesser of the following values:

- a. 50% of the Generating Facility Capacity, or
- b. 10% of the continuous conductor rating in watts at 0.9 power factor for the lowest rated feeder conductor upstream of the GF (i.e. 200kW @ 12kV), or
- c. 110% of the largest load block in the facility, or
- d. 500kW or some other maximum level indicated by Distribution Provider

To govern this quantity, a reverse power Protective Function will be provided to trip the connected Generator(s) within two seconds if the proposed amount of Inadvertent Export is exceeded.

- 3) Similarly, to ensure limited impact to the Distribution or Transmission System, the expected frequency of Inadvertent Export occurrences should be less than two occurrences per 24-hour period. Additionally, a separate reverse power or underpower Protective Function will be required (in addition to the reverse power Protective Function described in 2) above) to trip the connected Generator(s) if the duration of reverse power or underpower (i.e. ANY export) exceeds 60 seconds.

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(END OF ATTACHMENT A)

# **ATTACHMENT B**



**FILED**

06-15-12

04:59 PM

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking on the Commission's  
own motion to improve distribution level  
interconnection rules and regulations for certain  
classes of electric generators and electric storage  
resources.

Rulemaking 11-09-011  
(Filed September 22, 2011)

**PACIFIC GAS AND ELECTRIC COMPANY'S (U 39 E)  
PRO FORMA AGREEMENT FILING**

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**June 15, 2012**

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking on the Commission's own motion to improve distribution level interconnection rules and regulations for certain classes of electric generators and electric storage resources.

Rulemaking 11-09-011  
(Filed September 22, 2011)

**PACIFIC GAS AND ELECTRIC COMPANY'S (U 39 E)  
PRO FORMA AGREEMENT FILING**

**I. INTRODUCTION**

In compliance with Administrative Law Judge DeAngelis's *Ruling Granting the Motion of Vote Solar*, issued on April 20, 2012 ("ALJ Ruling"), Pacific Gas and Electric Company (PG&E) makes this pro forma agreement filing. Currently pending before the Commission is the March 16, 2012, *Motion for Approval of Settlement Agreement Revising Distribution Level Interconnection Rules and Regulations* ("Settlement Motion"). Included in the Settlement Motion is a package of documents that includes an updated and improved Rule 21 tariff and associated forms and agreements ("Revised Rule 21"). Attached are three additional forms that PG&E requests be approved for use with the Revised Rule 21: 1) Rule 21 Generator Interconnection Agreement (GIA) For Exporting Generating Facilities Interconnecting Under The Transmission Cluster Study Or Independent Study Process , 2) Rule 21 Independent Study Process Study Agreement (ISP SA) and 3) Rule 21 Pre-Application Report Request (PARR).

These additional pro forma agreements will be needed to facilitate interconnections requiring detailed study under the Revised Rule 21 as well as to request a pre-application report. Since these forms were not completed in time to be included in the Settlement Motion, the ALJ approved Vote Solar's request to have the utilities develop the GIA and ISP SA forms during the

interim period while the Commission reviews the Settlement Motion. Consistent with the ALJ Ruling PG&E worked with Southern California Edison Company (SCE) and San Diego Gas & Electric (SDG&E) to develop the documents and drafts were provided to the service list for Rulemaking (R.)11-09-011 on June 1, 2012. In addition to the GIA and ISP SA, the PARR form was also circulated since that will also be needed to implement the Revised Rule 21. One party, Clean Coalition, circulated informal comments on the drafts on June 8. Attached are PG&E's final forms incorporating some of the suggestions from Clean Coalition as well as other minor improvements. To aid parties' review, PG&E has also provided an updated redline of the GIA and ISP SA documents showing revisions from the SCE Wholesale Distribution Access Tariff documents used as the starting point for developing these Revised Rule 21 agreements.

## **II. DISCUSSION**

### **A. Response to Clean Coalition Suggestions**

The Clean Coalition proposed several modifications to the GIA. In response, PG&E has removed the word "Recitals". In addition, while not modifying the definition, PG&E has removed the term "Site Exclusivity" since that term is not used in the GIA and is already defined in the Revised Rule 21. Finally, PG&E has retained the language providing that "[u]nless Parties otherwise agree, Interconnection Customer shall transfer ownership of Distribution Provider's Interconnection Facilities and Stand-Alone Network Upgrades to Distribution Provider." This provision is important because once completed, these facilities are part of the overall utility grid. By giving parties the ability to reach an alternate agreement, this provision is also consistent with Revised Rule 21 section I. 1., which provides that such a transfer must take place unless otherwise provided in the GIA. In addition, the Assignment section of the GIA is left unchanged since it closely follows the assignment language pending in the Fast Track interconnection agreement already included in the Revised Rule 21.

Regarding the ISP SA, PG&E has corrected the typo noted by Clean Coalition. In addition, on Attachment B, the modifier "not required for projects 5 MW or less" has been added

to the list of information fields of concern to Clean Coalition. Finally, on the Pre-Application Report Request PG&E has underlined and bolded “if available” at the start of section 2 regarding information to be provided by applicants. Also, PG&E has included its preference for email submissions in section 4. Since this is a new process, PG&E believes it is still appropriate to allow applicants to mail in their forms. However, PG&E is willing to revisit this in Phase 2.

### **B. Additional Clarifying Edits**

In addition to responding to Clean Coalition’s suggestions, PG&E worked with SCE and SDG&E to incorporate a few additional clarifying edits. The sections changed include: the fourth WHEREAS recital; the definition of “Base Case;” the definition of “Commissioning Testing;” the definition of “Generator Interconnection Procedures (GIP);” the definition of “Interconnection; Interconnected;” Section 2.3.3.2 (changed to Section 2.3.4); Section 2.3.4 changed to Section 2.3.5; Section 2.4; Section 5.1.3; Section 5.15; Section 9.9.2; Section 14.2.1; Section 30.4; and Section 30.11. Additionally, the definition of Generator from the Revised Rule 21 was added because the term Generator is used in the agreement. While the final documents should closely track those of SCE and SDG&E they are revised to include PG&E’s letterhead and payment instructions as needed. All the edits made to date are reflected in the updated redlines of the GIA and ISP SA included with this filing.

### **III. CONCLUSION**

PG&E respectfully requests that the Commission approve the attached pro forma agreements for use with the Revised Rule 21.

Respectfully submitted,

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June 15, 2012

# ATTACHMENTS

- 1) RULE 21 GENERATOR INTERCONNECTION AGREEMENT (GIA)
- 2) ("**Track Changes**") RULE 21 GENERATOR INTERCONNECTION AGREEMENT (GIA)
- 3) RULE 21 INDEPENDENT STUDY PROCESS STUDY AGREEMENT
- 4) ("**Track Changes**") RULE 21 INDEPENDENT STUDY PROCESS STUDY AGREEMENT
- 5) RULE 21 PRE-APPLICATION REPORT REQUEST



**RULE 21 GENERATOR INTERCONNECTION AGREEMENT (GIA)  
FOR EXPORTING GENERATING FACILITIES  
INTERCONNECTING UNDER THE TRANSMISSION CLUSTER STUDY  
OR INDEPENDENT STUDY PROCESS**

**BETWEEN**

**[INTERCONNECTION CUSTOMER]**

**AND**

**PACIFIC GAS AND ELECTRIC COMPANY,**

**PROJECT: [PROJECT NAME]**



**RULE 21**  
**GENERATOR INTERCONNECTION**  
**AGREEMENT (GIA) FOR**  
**EXPORTING GENERATING FACILITIES**  
**INTERCONNECTING UNDER THE**  
**TRANSMISSION CLUSTER STUDY OR**  
**INDEPENDENT STUDY PROCESS**

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Appendix B – Milestones

Appendix C – Interconnection Details

Appendix D – Security Arrangements Details

Appendix E – Commercial Operation Date

Appendix F – Addresses for Delivery of Notices and Billings

Appendix G – Interconnection Customer’s Proportional Share of Costs of Network  
Upgrades for Applicable Project Cluster

**RULE 21 GENERATOR INTERCONNECTION AGREEMENT (GIA) FOR  
EXPORTING GENERATING FACILITIES INTERCONNECTING UNDER THE  
TRANSMISSION CLUSTER STUDY OR INDEPENDENT STUDY PROCESS**

**GENERATOR INTERCONNECTION AGREEMENT**

**THIS GENERATOR INTERCONNECTION AGREEMENT** (“GIA” or “Agreement”) is made and entered into this \_\_\_\_ day of \_\_\_\_\_, 20\_\_, by and between \_\_\_\_\_, a \_\_\_\_\_ organized and existing under the laws of the State/Commonwealth of \_\_\_\_\_ (“Interconnection Customer” with a Generating Facility), and Pacific Gas and Electric Company, a corporation organized and existing under the laws of the State of California (“Distribution Provider and/or Distribution Owner”). Interconnection Customer and Distribution Provider each may be referred to as a “Party” or collectively as the “Parties.” This Agreement shall be used for interconnection to the Distribution System through the Independent Study Process in the Distribution Provider’s California Public Utilities Commission (“CPUC” or “Commission”) approved Electric Rule 21 (“Rule 21”). This Agreement may also be used for interconnection to the Distribution System through the Transmission Cluster Study Process if FERC has approved changes to the Generator Interconnection Procedures set forth in the Distribution Provider’s WDAT Tariff which allow Interconnection Customer to sign this Agreement.

**WHEREAS**, Distribution Provider operates the Distribution System; and

**WHEREAS**, Interconnection Customer intends to own, lease and/or control and operate the Generating Facility identified in Appendix C to this Agreement; and,

**WHEREAS**, Interconnection Customer and Distribution Provider have agreed to enter into this Agreement for the purpose of interconnecting the Generating Facility with the Distribution System; and,

**WHEREAS**, the Interconnection Customer’s Interconnection Request was studied under the ☐ Transmission Cluster Study Process or ☐ Independent Study Process [check one]; and,

**WHEREAS**, the basis for the Parties entering into this Agreement is that Interconnection Customer is a Qualifying Facility (“QF”) and will sell all of its exports to the grid to the Distribution Provider under a power purchase agreement (“PPA”) entered into pursuant to the Public Utility Regulatory Policies Act of 1978 (“PURPA”); or, the basis for the Parties entering into this Agreement is: \_\_\_\_\_ (Insert Description or N/A)

**NOW, THEREFORE**, in consideration of and subject to the mutual covenants contained herein, it is agreed:

When used in this Generator Interconnection Agreement, terms with initial capitalization that are not defined in Article 1 shall have the meanings specified in the Article in which they are used or in Rule 21 or in the Distribution Provider’s WDAT Tariff.

**RULE 21 GENERATOR INTERCONNECTION AGREEMENT (GIA) FOR  
EXPORTING GENERATING FACILITIES INTERCONNECTING UNDER THE  
TRANSMISSION CLUSTER STUDY OR INDEPENDENT STUDY PROCESS**

**Article 1. Definitions**

**Adverse System Impact** shall mean the negative effects due to technical or operational limits on conductors or equipment being exceeded that may compromise the safety, power quality, and reliability of the electric system.

**Affected System** shall mean an electric system other than the Distribution Provider's Distribution System or Transmission System that may be affected by the proposed interconnection.

**Affected System Operator** shall mean the entity that operates an Affected System.

**Affiliate** shall mean, with respect to a corporation, partnership or other entity, each such other corporation, partnership or other entity that directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, such corporation, partnership or other entity.

**Ancillary Services** shall mean those services that are necessary to support the transmission of capacity and energy from resources to loads while maintaining reliable operation of the Distribution Provider's Distribution System in accordance with Good Utility Practice.

**Applicable Laws and Regulations** shall mean all duly promulgated applicable federal, state and local laws, regulations, rules, ordinances, codes, decrees, judgments, directives, or judicial or administrative orders, permits and other duly authorized actions of any Governmental Authority.

**Applicable Reliability Council** shall mean the reliability council applicable to the Distribution System to which the Generating Facility is directly interconnected.

**Applicable Reliability Standards** shall mean the requirements and guidelines of NERC, the Applicable Reliability Council, and the Control Area of the Distribution System to which the Generating Facility is directly interconnected, including the requirements pursuant to Section 215 of the Federal Power Act.

**Applicant** shall mean the entity submitting an Interconnection Request pursuant to Rule 21.

**Base Case** shall mean data including, but not limited to, base case power flow, short circuit, and stability data bases, underlying load, generation, and transmission facility assumptions, contingency lists, including relevant special protection systems, and transmission diagrams used to perform the Interconnection Studies. The Base Case may include Critical Energy Infrastructure Information (as that term is defined by FERC). The Base Case shall include (a) transmission facilities as approved by the Distribution Provider or CAISO, as



**RULE 21 GENERATOR INTERCONNECTION AGREEMENT (GIA) FOR  
EXPORTING GENERATING FACILITIES INTERCONNECTING UNDER THE  
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applicable, (b) planned distribution upgrades that may have an impact on the Interconnection Request, (c) Distribution Upgrades and Network Upgrades associated with generating facilities in (iv) below, and (d) generating facilities that (i) are directly interconnected to the Distribution System or CAISO Grid; (ii) are interconnected to Affected Systems and may have an impact on the Interconnection Request; (iii) have a pending request to interconnect to the Distribution System, Transmission System, or an Affected System; or (iv) are not interconnected to the Distribution System or CAISO Grid, but are subject to a fully executed generator interconnection agreement (or its equivalent predecessor agreement) or for which an unexecuted generator interconnection agreement (or its equivalent predecessor agreement) has been requested to be filed with FERC.

**Breach** shall mean the failure of a Party to perform or observe any material term or condition of the GIA.

**Breaching Party** shall mean a Party that is in Breach of the GIA.

**Business Day** shall mean Monday through Friday, excluding Federal and State Holidays.

**CAISO** shall mean the California Independent System Operator Corporation, a state-chartered, nonprofit, corporation that controls certain transmission facilities of all Participating Transmission Owners and dispatches certain generating units and loads.

**CAISO Grid** shall mean the system of transmission lines and associated facilities of the Participating Transmission Owners that have been placed under the CAISO's Operational Control.

**CAISO Tariff** shall mean the California Independent System Operator Corporation Operating Agreement and Tariff, as it may be modified from time to time, and accepted by the FERC.

**CAISO's Generator Interconnection Procedures (CAISO Tariff GIP)** shall mean the procedures included in the CAISO Tariff to interconnect a Generating Facility directly to the CAISO Grid, as such procedures may be modified from time to time, and accepted by FERC.

**Calendar Day** shall mean any day including Saturday, Sunday or a Federal and State Holiday.

**Commercial Operation** shall mean the status of a Generating Facility that has commenced generating electricity, excluding electricity generated during period which the Producer is engaged in on-site test operations and commissioning of the Generating Facility prior to Commercial Operation.

**Commercial Operation Date** shall mean the date on which a Generator at a Generating Facility commences Commercial Operation as agreed to by the Parties.

**RULE 21 GENERATOR INTERCONNECTION AGREEMENT (GIA) FOR  
EXPORTING GENERATING FACILITIES INTERCONNECTING UNDER THE  
TRANSMISSION CLUSTER STUDY OR INDEPENDENT STUDY PROCESS**

**Commissioning Testing** shall mean testing performed during the commissioning of all or part of a Generating Facility pursuant to Rule 21.

**Confidential Information:** See Rule 21 Section D.7 and Article 22 of this GIA.

**Construction Activities** shall mean actions by the Distribution Provider that result in irrevocable financial commitments for the purchase of major electrical equipment or land for Distribution Provider's Interconnection Facilities, Distribution Upgrades, or Network Upgrades assigned to the Interconnection Customer that occur after receipt of all appropriate governmental approvals needed for the Distribution Provider's Interconnection Facilities, Distribution Upgrades, or Network Upgrades.

**Control Area** shall mean Control Area as defined in the CAISO Tariff.

**Customer** shall mean the entity that receives or is entitled to receive Distribution Service through Distribution Provider's Distribution System or is a retail Customer of Distribution Provider connected to the Transmission System.

**Default** shall mean the failure of a Breaching Party to cure its Breach in accordance with Article 17 of the GIA.

**Distribution Owner** shall mean an entity that owns, leases or otherwise possesses an interest in the portion of the Distribution System at the Point of Interconnection and may be a Party to the GIA to the extent necessary.

**Distribution Provider** shall mean Pacific Gas and Electric Company.

**Distribution Provider's Interconnection Facilities** shall mean all facilities and equipment owned, controlled or operated by the Distribution Provider from the Point of Change of Ownership to the Point of Interconnection as identified in Appendix A to the GIA, including any modifications, additions or upgrades to such facilities and equipment. Distribution Provider's Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades.

**Distribution Service** shall mean the service of delivering energy over the Distribution System pursuant to the approved tariffs of the Distribution Provider other than services directly related to the Interconnection of a Generating Facility under Rule 21..

**Distribution System** shall mean all electric wires, equipment, and other facilities owned, controlled and operated by the Distribution Provider, other than Interconnection Facilities or the Transmission System, by which Distribution Provider provides Distribution Service to its Customers.

**RULE 21 GENERATOR INTERCONNECTION AGREEMENT (GIA) FOR  
EXPORTING GENERATING FACILITIES INTERCONNECTING UNDER THE  
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**Distribution Upgrades** shall mean the additions, modifications, and upgrades to the Distribution Provider's Distribution System at or beyond the Point of Interconnection to facilitate interconnection of the Generating Facility and render the Distribution Service. Distribution Upgrades do not include Interconnection Facilities.

**Effective Date** shall mean the date on which the GIA becomes effective upon execution by the Parties.

**Emergency** shall mean whenever in Distribution Provider's discretion an Unsafe Operating Condition or other hazardous condition exists or whenever access is necessary for emergency service restoration, and such immediate action is necessary to protect persons, Distribution Provider's facilities or property of others from damage or interference caused by Interconnection Customer's Generating Facility, or the failure of protective device to operate properly, or a malfunction of any electrical system equipment or a component part thereof.

**Engineering & Procurement (E&P) Agreement** shall mean an agreement that authorizes the Distribution Provider to begin engineering and procurement of long lead-time items necessary for the establishment of the interconnection in order to advance the implementation of the Interconnection Request.

**Environmental Law** shall mean Applicable Laws or Regulations relating to pollution or protection of the environment or natural resources.

**Federal Power Act** shall mean the Federal Power Act, as amended, 16 U.S.C. §§ 791a et seq.

**FERC** shall mean the Federal Energy Regulatory Commission or its successor.

**Full Capacity Deliverability Status** shall be as defined in the CAISO Tariff.

**Generating Facility** shall mean all generators, electrical wires, equipment, and other facilities owned or provided by Producer for the purpose of producing electric power, including storage.

**Generating Facility Capacity** shall mean the net capacity of the Generating Facility and the aggregate net capacity of the Generating Facility where it includes multiple Generators.

**Generator** shall mean a device converting mechanical, chemical, or solar energy into electrical energy, including all of its protective and control functions and structural appurtenances. One or more Generators comprise a Generating Facility.

**Generator Interconnection Agreement (GIA)** shall mean the agreement between Distribution Provider and the Producer providing for the Interconnection of a Generating Facility that give certain rights and obligations to effect or end Interconnection.

**RULE 21 GENERATOR INTERCONNECTION AGREEMENT (GIA) FOR  
EXPORTING GENERATING FACILITIES INTERCONNECTING UNDER THE  
TRANSMISSION CLUSTER STUDY OR INDEPENDENT STUDY PROCESS**

**Generator Interconnection Procedures (GIP)** shall mean the interconnection procedures applicable to an Interconnection Request pertaining to a Generating Facility set forth in Attachment I of the Distribution Provider's WDAT Tariff, subject to any modifications FERC may direct in the exercise of its jurisdiction.

**Generator Interconnection Study Process Agreement** shall mean the agreement between the Distribution Customer and the Interconnection Customer for conducting the Interconnection Studies for a proposed Generating Facility under the Transmission Cluster Study Process, a *pro forma* version of which is set forth in Attachment 6 of the GIP.

**Good Utility Practice** shall mean any of the practices, methods and acts engaged in or approved by a significant portion of the electric industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region.

**Governmental Authority** shall mean any federal, state, local or other governmental regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, or other governmental authority having jurisdiction over the Parties, their respective facilities, or the respective services they provide, and exercising or entitled to exercise any administrative, executive, police, or taxing authority or power; provided, however, that such term does not include Interconnection Customer, Distribution Provider, or any Affiliate thereof.

**Hazardous Substances** shall mean any chemicals, materials or substances defined as or included in the definition of "hazardous substances," "hazardous wastes," "hazardous materials," "hazardous constituents," "restricted hazardous materials," "extremely hazardous substances," "toxic substances," "radioactive substances," "contaminants," "pollutants," "toxic pollutants" or words of similar meaning and regulatory effect under any applicable Environmental Law, or any other chemical, material or substance, exposure to which is prohibited, limited or regulated by any applicable Environmental Law.

**Independent Study Process** shall mean the interconnection study process set forth in Rule 21 Section F.3.d.

**Independent Study Process Study Agreement** shall mean the agreement entered into by the Interconnection Customer and Distribution Provider which sets forth the Parties' agreement to perform Interconnection Studies under the Independent Study Process.

**Initial Synchronization Date** shall mean the date upon which the Generating Facility is initially synchronized and upon which Trial Operation begins.

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**In-Service Date** shall mean the estimated date upon which the Interconnection Customer reasonably expects it will be ready to begin use of the Distribution Provider's Interconnection Facilities.

**Interconnection; Interconnected** shall mean the physical connection of a Generating Facility in accordance with the requirements of Rule 21 so that Parallel Operation with Distribution Provider's Distribution or Transmission System can occur (has occurred).

**Interconnection Customer:** The definition of "Interconnection Customer" in this Agreement is intended to be identical to and used interchangeably with the definition of "Producer" in Rule 21.

**Interconnection Customer's Interconnection Facilities** shall mean all facilities and equipment, as identified in Appendix A of the GIA, that are located between the Generating Facility and the Point of Change of Ownership, including any modification, addition, or upgrades to such facilities and equipment necessary to physically and electrically interconnect the Generating Facility to the Distribution Provider's Distribution System. Interconnection Customer's Interconnection Facilities are sole use facilities.

**Interconnection Facilities** shall mean the electrical wires, switches and related equipment that are required in addition to the facilities required to provide electric Distribution Service to a Customer to allow Interconnection. Interconnection Facilities may be located on either side of the Point of Common Coupling as appropriate to their purpose and design. Interconnection Facilities may be integral to a Generating Facility or provided separately. Interconnection Facilities may be owned by either the Producer or the Distribution Provider.

**Interconnection Facilities Study** shall mean a study conducted by the Distribution Provider for an Interconnection Customer under the Independent Study Process to determine a list of facilities (including Distribution Provider's Interconnection Facilities, Distribution Upgrades, and Network Upgrades as identified in the Interconnection System Impact Study), the cost of those facilities, and the time required to interconnect the Generating Facility with the Distribution Provider's Distribution or Transmission System. The scope of the study is defined in Rule 21 Section G.3.c.

**Interconnection Financial Security:** Any of the financial instruments listed in Rule 21 Section F.4.a.

**Interconnection Handbook** shall mean a handbook, developed by the Distribution Provider and posted on the Distribution Provider's website or otherwise made available by the Distribution Provider, describing the technical and operational requirements for wholesale generators and loads connected to the Distribution System, as such handbook may be modified or superseded from time to time. Distribution Provider's standards contained in the Interconnection Handbook shall be deemed consistent with Good Utility Practice and Applicable

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Reliability Standards. In the event of a conflict between the terms of this GIA and the terms of the Distribution Provider's Interconnection Handbook, the terms in this GIA shall govern.

**Interconnection Request** shall mean an Applicant's request to interconnect a new Generating Facility, or to increase the capacity of, or make a Material Modification to the operating characteristics of, an existing Generating Facility that is interconnected with the Distribution Provider's Distribution or Transmission System.

**Interconnection Service** shall mean the service provided by the Distribution Provider associated with interconnecting the Interconnection Customer's Generating Facility to the Distribution Provider's Distribution System and enabling it to receive electric energy and capacity from the Generating Facility at the Point of Interconnection, pursuant to the terms of the GIA and, if applicable, the Distribution Provider's Rule 21.

**Interconnection Study** shall mean a study to establish the requirements for Interconnection of a Generating Facility with Distribution Provider's Distribution System or Transmission System, pursuant to Rule 21. For an Applicant in the Transmission Cluster Study Process, this shall mean any of the following studies: the Phase I Interconnection Study and the Phase II Interconnection Study described in Section 4.8 of the GIP. For an Applicant in the Independent Study Process, this shall mean any of the following studies: the Interconnection System Impact Study and the Interconnection Facilities Study.

**Interconnection Study Cycle** shall mean all requirements, actions, and respective obligations of the Distribution Provider and Interconnection Customer under the GIP or Rule 21 applicable to an Interconnection Request submitted in a particular Transmission Cluster Application Window through execution by the parties of a GIA.

**Interconnection System Impact Study** shall mean an engineering study conducted by the Distribution Provider for an Interconnection Customer under the Independent Study Process that evaluates the impact of the proposed interconnection on the safety and reliability of Distribution Provider's Distribution System and/or Transmission System and, if applicable, an Affected System. The scope of the study is defined in Rule 21 Section G.3.c.

**IRS** shall mean the Internal Revenue Service.

**Loss** shall mean any and all losses relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the other Party's performance, or non-performance of its obligations under the GIA on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the indemnifying Party.

**Material Modification** shall mean those modifications that have a material impact on cost or timing of any Interconnection Request with a later queue priority date or a change in



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Point of Interconnection. A Material Modification does not include a change in ownership of a Generating Facility.

**Metering** shall mean the measurement of electrical power in kilowatts (kW) and/or energy in kilowatt-hours (kWh), and if necessary, reactive power in kVAR at a point, and its display to Distribution Provider, as required by Rule 21.

**Metering Equipment** shall mean all equipment, hardware, software, including meter cabinets, conduit, etc., that are necessary for Metering..

**NERC** shall mean the North American Electric Reliability Council or its successor organization.

**Network Upgrades** shall mean Network Upgrades as defined by the CAISO Tariff.

**Operational Control** shall mean the rights of the CAISO under the Transmission Control Agreement and the CAISO Tariff to direct the parties to the Transmission Control Agreement how to operate their transmission lines and facilities and other electric plant affecting the reliability of those lines and facilities for the purpose of affording comparable non-discriminatory transmission access and meeting applicable reliability criteria.

**Parallel Operation** shall mean the simultaneous operation of a Generator with power delivered or received by Distribution Provider while Interconnected. For the purpose of Rule 21, Parallel Operation includes only those Generating Facilities that are Interconnected with Distribution Provider's Distribution or Transmission System for more than 60 cycles (one second).

**Participating Transmission Owner** shall mean an entity which (i) owns, operates, and maintains transmission lines and associated facilities and/or has entitlements to use certain transmission lines and associated facilities and (ii) has transferred to the CAISO operational control of such facilities and/or entitlements to be made part of the CAISO Grid.

**Party or Parties** shall mean Producer and/or Distribution Provider.

**Phase I Interconnection Study** shall mean an engineering study for Applicants in the Transmission Cluster Study Process as defined in the WDAT Tariff.

**Phase II Interconnection Study** shall mean an engineering and operational study for Applicants in the Transmission Cluster Study Process conducted by the Distribution Provider to determine the Point of Interconnection and a list of facilities (including Distribution Provider's Interconnection Facilities, Network Upgrades, Distribution Upgrades, and Stand Alone Network Upgrades), the estimated cost of those facilities, the costs allocated to each project, and the estimated time required to interconnect the Generating Facility(ies) with the Distribution System. The portion of the study required to evaluate the impacts on the CAISO Grid will be coordinated with the CAISO and will be completed in a manner consistent with the CAISO Tariff GIP.

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**Point of Change of Ownership** shall mean the point, as set forth in Appendix A to the GIA, where the Interconnection Customer's Interconnection Facilities connect to the Distribution Provider's Interconnection Facilities.

**Point of Interconnection** shall mean the point where the Interconnection Facilities connect with Distribution Provider's Distribution or Transmission System. This may or may not be coincident with the Point of Common Coupling..

**Pre-Construction Activities** shall mean the actions by the Distribution Provider, other than those required by an Engineering and Procurement Agreement under Section F.3.f. of Rule 21 or Section 6 of the GIP, undertaken prior to Construction Activities in order to prepare for the construction of the Distribution Provider's Interconnection Facilities, Distribution Upgrades, or Network Upgrades assigned to the Interconnection Customer, including, but not limited to, preliminary engineering, permitting activities, environmental analysis, or other activities specifically needed to obtain governmental approvals for the Distribution Provider's Interconnection Facilities, Distribution Upgrades, or Network Upgrades.

**Producer** shall mean the entity that executes a GIA with Distribution Provider. Producer may or may not own or operate the Generating Facility, but is responsible for the rights and obligations related to the Generator Interconnection Agreement.

**Reasonable Efforts** shall mean, with respect to an action required to be attempted or taken by a Party under the GIA, efforts that are timely and consistent with Good Utility Practice and are otherwise substantially equivalent to those a Party would use to protect its own interests.

**Results Meeting** for Applicants in the Transmission Cluster Study Process shall mean the meeting among the Distribution Provider, the Interconnection Customer, and, if applicable, the CAISO and other Affected System operators to discuss the results of the Phase I Interconnection Study as set forth in Section 4.11 of the GIP. Results Meeting for Applicants in the Independent Study Process shall mean the meetings among the Distribution Provider, the Interconnection Customer, and, if applicable, the CAISO to discuss either the results of the Interconnection System Impact Study as set forth in Rule 21 Section 3.d.iii. or the results of the Interconnection Facilities Study as set forth in Rule 21 Section 3.d.ix.

**Stand Alone Network Upgrades** shall mean Network Upgrades that an Interconnection Customer may construct without affecting day-to-day operations of the Transmission System during their construction. Both the Distribution Provider and the Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify them in Appendix A to the GIA.

**System Integrity** shall mean the condition under which Distribution Provider's Distribution and Transmission System is deemed safe and can reliably perform its intended functions in accordance with the safety and reliability rules of Distribution Provider.



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**System Protection Facilities** shall mean the equipment, including necessary protection signal communications equipment, required to protect (1) the Distribution Provider's Distribution System, the CAISO Controlled Grid, and Affected Systems from faults or other electrical disturbances occurring at the Generating Facility and (2) the Generating Facility from faults or other electrical system disturbances occurring on the Distribution Provider's Distribution System, the CAISO Controlled Grid or on other delivery systems or other generating systems to which the Distribution Provider's Distribution System and Transmission System is directly connected.

**Transmission Cluster Application Window** shall mean a period of time specified by the Distribution Provider in which Interconnection Requests will be accepted for processing under the Transmission Cluster Study Process as set forth in Section 4.1 of the GIP.

**Transmission Cluster Study Process** shall mean the Transmission Cluster Study Process set forth in GIP Section 4.

**Transmission Control Agreement** shall mean CAISO FERC Electric Tariff No. 7, as it may be modified from time to time, and accepted by the FERC, or any successor agreement.

**Transmission System** shall mean those transmission facilities owned by the Distribution Provider that have been placed under the CAISO's Operational Control and are part of the CAISO Grid, as defined in the CAISO Tariff.

**Trial Operation** shall mean the period during which Interconnection Customer is engaged in on-site test operations and commissioning of the Generating Facility prior to Commercial Operation.

**Uncontrollable Force** shall mean any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm, flood, earthquake, explosion, breakage or accident to machinery or equipment, any curtailment, order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause beyond the reasonable control of the Distribution Provider or Interconnection Customer which could not be avoided through the exercise of Good Utility Practice. An Uncontrollable Force event does not include acts of negligence or intentional wrongdoing by the Party claiming Uncontrollable Force.

**Unsafe Operating Conditions** shall mean conditions that, if left uncorrected, could result in harm to personnel, damage to equipment, loss of System Integrity or operation outside pre-established parameters required by the Generator Interconnection Agreement.

**WDT Tariff** shall mean the Wholesale Distribution Tariff, the Distribution Provider's Tariff through which open access transmission service and Interconnection Service are offered, as filed with FERC, and as amended or supplemented from time to time, or any successor tariff.

**Article 2. Effective Date, Term, and Termination**

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- 2.1 Effective Date.** This GIA shall become effective upon execution by the Parties.
- 2.2 Term of Agreement.** Subject to the provisions of Article 2.3, this GIA shall remain in effect for a period of \_\_\_\_\_ (xx) years from the Effective Date and shall be automatically renewed for each successive one-year period thereafter.
- 2.3 Termination Procedures.**
- 2.3.1 Written Notice.** This GIA may be terminated by Interconnection Customer after giving Distribution Provider ninety (90) Calendar Days advance written notice, or by Distribution Provider after the Generating Facility permanently ceases Commercial Operation.
- 2.3.2 Default.** Either Party may terminate this GIA in accordance with Article 17.
- 2.3.3 QF Status.** If Rule 21 applicability for this interconnection is based on the Interconnection Customer maintaining QF status and selling all its exports to the grid to Distribution Provider under a PURPA PPA, then this provision applies and Distribution Provider may terminate this GIA if Interconnection Customer fails to maintain its QF status for the term of this GIA or upon termination of the Interconnection Customer's PURPA PPA.
- 2.3.3.1** If Section 2.3.3 applies, the Interconnection Customer is responsible for maintaining QF status and must notify Distribution Provider sixty (60) Calendar Days in advance of Interconnection Customer failing to maintain its QF status, selling to a third-party, or termination of its PURPA PPA. If Interconnection Customer fails to provide such notice, it is wholly responsible for any penalties incurred from any Governmental Authority or the CAISO, including penalties and charges incurred by the Distribution Provider as a result of this failure to notify the Distribution Provider.
- 2.3.4** If Interconnection Customer is no longer eligible for a Rule 21 interconnection then Distribution Provider may terminate this Agreement.
- 2.3.5** Notwithstanding Articles 2.3.1 and 2.3.2, and 2.3.3, no termination shall become effective until the Parties have complied with all Applicable Laws and Regulations applicable to such termination, and the Interconnection Customer has fulfilled its termination cost obligations under Article 2.4.
- 2.4 Termination Costs.** If a Party elects to terminate this Agreement pursuant to Article 2.3 above, each Party shall pay all costs incurred (including any cancellation costs relating to orders or contracts for Interconnection Facilities and equipment) or charges assessed by the other Party,

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as of the date of the non-terminating Party's receipt of such notice of termination, that are the responsibility of the Party under this GIA. In the event of termination by a Party, the Parties shall use commercially Reasonable Efforts to mitigate the costs, damages and charges arising as a consequence of termination. Upon termination of this GIA:

- 2.4.1** With respect to any portion of Distribution Provider's Interconnection Facilities that have not yet been constructed or installed, Distribution Provider shall to the extent possible and with Interconnection Customer's authorization cancel any pending orders of, or return, any materials or equipment for, or contracts for construction of, such facilities; provided that in the event Interconnection Customer elects not to authorize such cancellation, Interconnection Customer shall assume all payment obligations with respect to such materials, equipment, and contracts, and Distribution Provider shall deliver such material and equipment, and, if necessary, assign such contracts, to Interconnection Customer as soon as practicable, at Interconnection Customer's expense. To the extent that Interconnection Customer has already paid Distribution Provider for any or all such costs of materials or equipment not taken by Interconnection Customer, Distribution Provider shall promptly refund such amounts to Interconnection Customer, less any costs, including penalties incurred by Distribution Provider to cancel any pending orders of or return such materials, equipment, or contracts.

If an Interconnection Customer terminates this GIA or its GIA is terminated pursuant to Article 2.3 above, it shall be responsible for all costs incurred in association with that Interconnection Customer's interconnection, including any cancellation costs relating to orders or contracts for Interconnection Facilities and equipment, and other expenses including any Distribution Upgrades and Network Upgrades for which Distribution Provider has incurred expenses and has not been reimbursed by Interconnection Customer.

- 2.4.2** Distribution Provider may, at its option, retain any portion of such materials, equipment, or facilities that Interconnection Customer chooses not to accept delivery of, in which case Distribution Provider shall be responsible for all costs associated with procuring such materials, equipment, or facilities.
- 2.4.3** With respect to any portion of the Interconnection Facilities, and any other facilities already installed or constructed pursuant to the terms of this GIA, Interconnection Customer shall be responsible for all costs associated with the removal, relocation or other disposition or retirement of such materials, equipment, or facilities.
- 2.5 Disconnection.** Upon termination of this GIA, the Parties will take all appropriate steps to disconnect the Generating Facility from the Distribution System. All costs required to effectuate such disconnection shall be borne by the terminating Party, unless such

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termination resulted from the non-terminating Party's Default of this GIA or such non-terminating Party otherwise is responsible for these costs under this GIA.

- 2.6 Survival.** This GIA shall continue in effect after termination to the extent necessary to provide for final billings and payments and for costs incurred hereunder, including billings and payments pursuant to this GIA; to permit the determination and enforcement of liability and indemnification obligations arising from acts or events that occurred while this GIA was in effect; and to permit each Party to have access to the lands of the other Party pursuant to this GIA or other applicable agreements, to disconnect, remove or salvage its own facilities and equipment.

**Article 3. [Intentionally Omitted]**

**Article 4. Scope of Service**

- 4.1 Interconnection Service.** Interconnection Service allows Interconnection Customer to connect the Generating Facility to the Distribution System and be eligible to deliver the Generating Facility's output using the capacity of the Distribution System to the CAISO Grid. To the extent Interconnection Customer wants to receive Interconnection Service, Distribution Provider shall construct facilities identified in Appendices A and C that the Distribution Provider is responsible to construct.
- 4.2 Provision of Service.** Distribution Provider shall provide Interconnection Service for the Generating Facility at the Point of Interconnection.
- 4.3 Performance Standards.** Each Party shall perform all of its obligations under this GIA in accordance with Applicable Laws and Regulations, Applicable Reliability Standards, and Good Utility Practice, and to the extent a Party is required or prevented or limited in taking any action by such regulations and standards, such Party shall not be deemed to be in Breach of this GIA for its compliance therewith. If such Party is a Distribution Provider or Distribution Owner, then that Party shall amend the GIA.
- 4.4 No Distribution Service or Transmission Service.** The execution of this GIA does not constitute a request for, nor the provision of, Distribution Service under any tariff or transmission service under any tariff.

**Article 5. Interconnection Facilities Engineering, Procurement, and Construction**

- 5.1 Options.** Unless otherwise mutually agreed to between the Parties, Interconnection Customer shall select the In-Service Date, Initial Synchronization Date, and Commercial Operation Date; and either Standard Option or Option to Build set forth below for completion of Distribution Provider's Interconnection Facilities, Distribution Upgrades, and Network Upgrades as set forth in Appendix A, Interconnection Facilities,

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Distribution Upgrades, and Network Upgrades, and such dates and selected option shall be set forth in Appendix B, Milestones.

**5.1.1 Standard Option.** Distribution Provider shall design, procure, and construct Distribution Provider's Interconnection Facilities and Distribution Upgrades using Reasonable Efforts to complete Distribution Provider's Interconnection Facilities and Distribution Upgrades by the dates set forth in Appendix B, Milestones. Network Upgrades shall be designed, procured, and constructed in accordance with the CAISO Tariff using Reasonable Efforts to complete Network Upgrades by the dates set forth in Appendix B, Milestones. Distribution Provider shall not be required to undertake any action which is inconsistent with its standard safety practices, its material and equipment specifications, its design criteria and construction procedures, its labor agreements, and Applicable Laws and Regulations. In the event Distribution Provider reasonably expects that it will not be able to complete Distribution Provider's Interconnection Facilities, Distribution Upgrades, and Network Upgrades by the specified dates, Distribution Provider shall promptly provide written notice to Interconnection Customer and shall undertake Reasonable Efforts to meet the earliest dates thereafter.

**5.1.2 [Intentionally Omitted.]**

**5.1.3 Option to Build.** If the dates designated by Interconnection Customer are not acceptable to Distribution Provider and if the Parties agree, Interconnection Customer shall have the option to assume responsibility for the design, procurement and construction of Distribution Provider's Interconnection Facilities and Stand Alone Network Upgrades. Interconnection Customer's Option to Build and any design, procurement, and construction pursuant to this option shall be subject to the approval of Distribution Provider and the provisions of Rule 21 Section I. Distribution Provider and Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify such Stand Alone Network Upgrades in Appendix A. Except for Stand Alone Network Upgrades, Interconnection Customer shall have no right to construct Network Upgrades under this option. If Distribution Provider does not approve Interconnection's Option to Build, the Standard Option applies.

**5.2 General Conditions Applicable to Option to Build.** If Interconnection Customer assumes responsibility for the design, procurement and construction of Distribution Provider's Interconnection Facilities and Stand Alone Network Upgrades,

(1) Interconnection Customer shall engineer, procure equipment, and construct Distribution Provider's Interconnection Facilities and Stand Alone Network Upgrades (or portions thereof) using Good Utility Practice and using standards and specifications provided in advance by Distribution Provider;

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- (2) Interconnection Customer's engineering, procurement and construction of Distribution Provider's Interconnection Facilities and Stand Alone Network Upgrades shall comply with all requirements of law to which Distribution Provider would be subject in the engineering, procurement or construction of Distribution Provider's Interconnection Facilities and Stand Alone Network Upgrades;
- (3) Distribution Provider shall review and approve the engineering design, equipment acceptance tests, and the construction of Distribution Provider's Interconnection Facilities and Stand Alone Network Upgrades;
- (4) prior to commencement of construction, Interconnection Customer shall provide to Distribution Provider a schedule for construction of Distribution Provider's Interconnection Facilities and Stand Alone Network Upgrades, and shall promptly respond to requests for information from Distribution Provider;
- (5) at any time during construction, Distribution Provider shall have the right to gain unrestricted access to Distribution Provider's Interconnection Facilities and Stand Alone Network Upgrades and to conduct inspections of the same;
- (6) at any time during construction, should any phase of the engineering, equipment procurement, or construction of Distribution Provider's Interconnection Facilities and Stand Alone Network Upgrades not meet the standards and specifications provided by Distribution Provider, Interconnection Customer shall be obligated to remedy deficiencies in that portion of Distribution Provider's Interconnection Facilities and Stand Alone Network Upgrades;
- (7) Interconnection Customer shall indemnify Distribution Provider for claims arising from Interconnection Customer's construction of Distribution Provider's Interconnection Facilities and Stand Alone Network Upgrades under the terms and procedures applicable to Article 18.1 Indemnity;
- (8) Interconnection Customer shall transfer control of Distribution Provider's Interconnection Facilities to the Distribution Provider and shall transfer Operational Control of Stand Alone Network Upgrades to the CAISO;
- (9) Unless Parties otherwise agree, Interconnection Customer shall transfer ownership of Distribution Provider's Interconnection Facilities and Stand-Alone Network Upgrades to Distribution Provider;
- (10) Distribution Provider shall approve and accept for operation and maintenance Distribution Provider's Interconnection Facilities and Stand Alone Network Upgrades to the extent engineered, procured, and constructed in accordance with this Article 5.2; and



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(11) Interconnection Customer shall deliver to Distribution Provider “as-built” drawings, information, and any other documents that are reasonably required by Distribution Provider to assure that the Interconnection Facilities and Stand-Alone Network Upgrades are built to the standards and specifications required by Distribution Provider.

**5.3 [Intentionally Omitted.]**

**5.4 Power System Stabilizers.** The Interconnection Customer shall procure, install, maintain and operate Power System Stabilizers in accordance with Applicable Reliability Standards, the guidelines and procedures established by the Applicable Reliability Council, and in accordance with the provisions of Section 4.6.5.1 of the CAISO Tariff. Distribution Provider reserves the right to reasonably establish minimum acceptable settings for any installed Power System Stabilizers, subject to the design and operating limitations of the Generating Facility. If the Generating Facility’s Power System Stabilizers are removed from service or not capable of automatic operation, Interconnection Customer shall immediately notify Distribution Provider and Distribution Provider’s system operator, or its designated representative. The requirements of this paragraph shall not apply to wind generators of the induction type.

**5.5 Equipment Procurement.** If responsibility for construction of Distribution Provider’s Interconnection Facilities, Distribution Upgrades, or Network Upgrades is to be borne by Distribution Provider, then Distribution Provider shall commence design of Distribution Provider’s Interconnection Facilities, Distribution Upgrades, or Network Upgrades and procure necessary equipment as soon as practicable after all of the following conditions are satisfied, unless the Parties otherwise agree in writing:

**5.5.1** Distribution Provider has completed the Interconnection Studies pursuant to the Generator Interconnection Study Process Agreement for Transmission Cluster Study Process Applicants, or Distribution Provider has completed the Interconnection Studies pursuant to the Independent Study Process Study Agreement for Independent Study Process Applicants.

**5.5.2** Distribution Provider has received written authorization to proceed with design and procurement from Interconnection Customer by the date specified in Appendix B, Milestones; and

**5.5.3** Interconnection Customer has provided security to Distribution Provider in accordance with Article 11.5 by the dates specified in Appendix B, Milestones.

**5.6 Construction Commencement.** Distribution Provider shall commence construction of Distribution Provider’s Interconnection Facilities, Distribution Upgrades, and Network

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Upgrades for which it is responsible as soon as practicable after the following additional conditions are satisfied:

- 5.6.1** Approval of the appropriate Governmental Authority has been obtained for any facilities requiring regulatory approval;
  - 5.6.2** Necessary real property rights and rights-of-way have been obtained, to the extent required for the construction of a discrete aspect of Distribution Provider's Interconnection Facilities, Distribution Upgrades, and Network Upgrades;
  - 5.6.3** Distribution Provider has received written authorization to proceed with construction from Interconnection Customer by the date specified in Appendix B, Milestones; and
  - 5.6.4** Interconnection Customer has provided security to Distribution Provider in accordance with Article 11.5 by the dates specified in Appendix B, Milestones.
- 5.7 Work Progress.** The Parties will keep each other advised periodically as to the progress of their respective design, procurement and construction efforts. Either Party may, at any time, request a progress report from the other Party. If, at any time, Interconnection Customer determines that the completion of Distribution Provider's Interconnection Facilities will not be required until after the specified In-Service Date, Interconnection Customer will provide written notice to Distribution Provider of such later date upon which the completion of Distribution Provider's Interconnection Facilities will be required.
- 5.8 Information Exchange.** As soon as reasonably practicable after the Effective Date, the Parties shall exchange information regarding the design and compatibility of the Parties' Interconnection Facilities and compatibility of the Interconnection Facilities with Distribution Provider's Distribution System, and shall work diligently and in good faith to make any necessary design changes.
- 5.9 Limited Operation.** If any of Distribution Provider's Interconnection Facilities, Distribution Upgrades, or Network Upgrades are not reasonably expected to be completed prior to the Commercial Operation Date of the Generating Facility, Distribution Provider shall, upon the request and at the expense of Interconnection Customer, perform operating studies on a timely basis to determine the extent to which the Generating Facility and Interconnection Customer's Interconnection Facilities may operate prior to the completion of Distribution Provider's Interconnection Facilities, Distribution Upgrades, or Network Upgrades consistent with Applicable Laws and Regulations, Applicable Reliability Standards, Good Utility Practice, and this GIA. Distribution Provider shall permit Interconnection Customer to operate the Generating Facility and Interconnection Customer's Interconnection Facilities in accordance with the results of such studies.



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**5.10 Interconnection Customer's Interconnection Facilities ('ICIF').** Interconnection Customer shall, at its expense, design, procure, construct, own and install the ICIF, as set forth in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades.

**5.10.1 Interconnection Customer's Interconnection Facility Specifications.**

Interconnection Customer shall submit initial specifications for the ICIF, including System Protection Facilities, to Distribution Provider at least one hundred eighty (180) Calendar Days prior to the Initial Synchronization Date; and final specifications for review and comment at least ninety (90) Calendar Days prior to the Initial Synchronization Date. Distribution Provider shall review such specifications to ensure that the ICIF are compatible with the technical specifications, operational control, and safety requirements of Distribution Provider and comment on such specifications within thirty (30) Calendar Days of Interconnection Customer's submission. All specifications provided hereunder shall be deemed confidential.

**5.10.2 Distribution Provider's Review.** Distribution Provider's review of Interconnection Customer's final specifications shall not be construed as confirming, endorsing, or providing a warranty as to the design, fitness, safety, durability or reliability of the Generating Facility, or the ICIF. Interconnection Customer shall make such changes to the ICIF as may reasonably be required by Distribution Provider, in accordance with Good Utility Practice, to ensure that the ICIF are compatible with the technical specifications, operational control, and safety requirements of Distribution Provider.

**5.10.3 ICIF Construction.** The ICIF shall be designed and constructed in accordance with Good Utility Practice. Within one hundred twenty (120) Calendar Days after the Commercial Operation Date, unless the Parties agree on another mutually acceptable deadline, Interconnection Customer shall deliver to Distribution Provider "as-built" drawings, information and documents for the ICIF, such as: a one-line diagram, a site plan showing the Generating Facility and the ICIF, plan and elevation drawings showing the layout of the ICIF, a relay functional diagram, relaying AC and DC schematic wiring diagrams and relay settings for all facilities associated with Interconnection Customer's step-up transformers, the facilities connecting the Generating Facility to the step-up transformers and the ICIF, and the impedances (determined by factory tests) for the associated step-up transformers and the Generating Facility. The Interconnection Customer shall provide Distribution Provider specifications for the excitation system, automatic voltage regulator, Generating Facility control and protection settings, transformer tap settings, and communications, if applicable.

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**5.10.4 Interconnection Customer to Meet Requirements of the Distribution**

**Provider's Interconnection Handbook.** The Interconnection Customer shall comply with the Distribution Provider's Interconnection Handbook. In the event of a conflict between the terms of this GIA and the terms of the Distribution Provider's Interconnection Handbook, the terms in this GIA shall govern.

- 5.11 Distribution Provider's Interconnection Facilities Construction.** Distribution Provider's Interconnection Facilities shall be designed and constructed in accordance with Good Utility Practice. Upon request, within one hundred twenty (120) Calendar Days after the Commercial Operation Date, unless the Parties agree on another mutually acceptable deadline, Distribution Provider shall deliver to Interconnection Customer the following "as-built" drawings, information and documents for Distribution Provider's Interconnection Facilities: No as-built drawings will be provided.

Distribution Provider will obtain control for operating and maintenance purposes of Distribution Provider's Interconnection Facilities and Stand Alone Network Upgrades upon completion of such facilities. Pursuant to Article 5.2, the CAISO will obtain Operational Control of the Stand Alone Network Upgrades prior to the Commercial Operation Date.

- 5.12 Access Rights.** Upon reasonable notice and supervision by a Party, and subject to any required or necessary regulatory approvals, a Party ("Granting Party") shall furnish at no cost to the other Party ("Access Party") any rights of use, licenses, rights of way and easements with respect to lands owned or controlled by the Granting Party, its agents (if allowed under the applicable agency agreement), or any Affiliate, that are necessary to enable the Access Party to obtain ingress and egress to construct, operate, maintain, repair, test (or witness testing), inspect, replace or remove facilities and equipment to: (i) interconnect the Generating Facility with the Distribution System; (ii) operate and maintain the Generating Facility, the Interconnection Facilities and the Distribution System; and (iii) disconnect or remove the Access Party's facilities and equipment upon termination of this GIA. In exercising such licenses, rights of way and easements, the Access Party shall not unreasonably disrupt or interfere with normal operation of the Granting Party's business and shall adhere to the safety rules and procedures established in advance, as may be changed from time to time, by the Granting Party and provided to the Access Party.

- 5.13 Lands of Other Property Owners.** If any part of Distribution Provider or Distribution Owner's Interconnection Facilities, Distribution Upgrades, and/or Network Upgrades is to be installed on property owned by persons other than Interconnection Customer or Distribution Provider or Distribution Owner, Distribution Provider or Distribution Owner shall at Interconnection Customer's expense use efforts, similar in nature and extent to those that it typically undertakes on its own behalf or on behalf of its Affiliates, including use of its eminent domain authority, and to the extent consistent with state law, to procure from such persons any rights of use, licenses, rights of way and easements that are

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necessary to construct, operate, maintain, test, inspect, replace or remove Distribution Provider or Distribution Owner's Interconnection Facilities, Distribution Upgrades, and/or Network Upgrades upon such property.

**5.14 Permits.** Distribution Provider or Distribution Owner and Interconnection Customer shall cooperate with each other in good faith in obtaining all permits, licenses and authorizations that are necessary to accomplish the interconnection in compliance with Applicable Laws and Regulations. With respect to this paragraph, Distribution Provider or Distribution Owner shall provide permitting assistance to Interconnection Customer comparable to that provided to Distribution Provider's own, or an Affiliate's generation.

**5.15 Early Construction of Base Case Facilities.** Interconnection Customer may request Distribution Provider to construct, and Distribution Provider shall construct, using Reasonable Efforts to accommodate Interconnection Customer's In-Service Date, all or any portion of any Distribution Upgrades required for Interconnection Customer to be interconnected to the Distribution System which are included in the Base Case of the Facilities Study for Interconnection Customer, and which also are required to be constructed for another Interconnection Customer, but where such construction is not scheduled to be completed in time to achieve Interconnection Customer's In-Service Date. Network Upgrades required for Interconnection Customer to be interconnected to the Distribution System shall be constructed in accordance with the CAISO Tariff. Interconnection Customer shall be responsible for all costs incurred pursuant to this Article 5.15.

**5.16 [Intentionally Omitted.]**

**5.17 Taxes.**

**5.17.1 Interconnection Customer Payments Not Taxable.** The Parties intend that all payments or property transfers made by Interconnection Customer to Distribution Provider for the installation of Distribution Provider's Interconnection Facilities, Distribution Upgrades, and the Network Upgrades shall be non-taxable, either as contributions to capital, or as an advance, in accordance with the Internal Revenue Code and any applicable state income tax laws and shall not be taxable as contributions in aid of construction or otherwise under the Internal Revenue Code and any applicable state income tax laws.

**5.17.2 Representations and Covenants.** In accordance with IRS Notice 2001-82 and IRS Notice 88-129, Interconnection Customer represents and covenants that (i) ownership of the electricity generated at the Generating Facility will pass to another party prior to the transmission of the electricity on the Distribution System, (ii) for income tax purposes, the amount of any payments and the cost of any property transferred to Distribution Provider for Distribution Provider's Interconnection Facilities will be capitalized by Interconnection Customer as an

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intangible asset and recovered using the straight-line method over a useful life of twenty (20) years, and (iii) any portion of Distribution Provider's Interconnection Facilities that is a "dual-use intertie," within the meaning of IRS Notice 88-129, is reasonably expected to carry only a de minimis amount of electricity in the direction of the Generating Facility. For this purpose, "de minimis amount" means no more than 5 percent of the total power flows in both directions, calculated in accordance with the "5 percent test" set forth in IRS Notice 88-129. This is not intended to be an exclusive list of the relevant conditions that must be met to conform to IRS requirements for non-taxable treatment.

At Distribution Provider's request, Interconnection Customer shall provide Distribution Provider with a report from an independent engineer confirming its representation in clause (iii), above. Distribution Provider represents and covenants that the cost of Distribution Provider's Interconnection Facilities paid for by Interconnection Customer will have no net effect on the base upon which rates are determined.

**5.17.3 Indemnification for the Cost Consequences of Current Tax Liability Imposed Upon the Distribution Provider.** Notwithstanding Article 5.17.1, Interconnection Customer shall protect, indemnify and hold harmless Distribution Provider from the cost consequences of any current tax liability imposed against Distribution Provider as the result of payments or property transfers made by Interconnection Customer to Distribution Provider under this GIA for Interconnection Facilities, as well as any interest and penalties, other than interest and penalties attributable to any delay caused by Distribution Provider.

Distribution Provider shall not include a gross-up for the cost consequences of any current tax liability in the amounts it charges Interconnection Customer under this GIA unless (i) Distribution Provider has determined, in good faith, that the payments or property transfers made by Interconnection Customer to Distribution Provider should be reported as income subject to taxation or (ii) any Governmental Authority directs Distribution Provider to report payments or property as income subject to taxation; provided, however, that Distribution Provider may require Interconnection Customer to provide security for Interconnection Facilities, in a form reasonably acceptable to Distribution Provider (such as a parental guarantee or a letter of credit), in an amount equal to the cost consequences of any current tax liability under this Article 5.17. Interconnection Customer shall reimburse Distribution Provider for such costs on a fully grossed-up basis, in accordance with Article 5.17.4, within thirty (30) Calendar Days of receiving written notification from Distribution Provider of the amount due, including detail about how the amount was calculated.

The indemnification obligation shall terminate at the earlier of (1) the expiration of the ten year testing period and the applicable statute of limitation, as it may be

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extended by Distribution Provider upon request of the IRS, to keep these years open for audit or adjustment, or (2) the occurrence of a subsequent taxable event and the payment of any related indemnification obligations as contemplated by this Article 5.17.

**5.17.4 Tax Gross-Up Amount.** Interconnection Customer's liability for the cost consequences of any current tax liability under this Article 5.17 shall be calculated on a fully grossed-up basis. Except as may otherwise be agreed to by the parties, this means that Interconnection Customer will pay Distribution Provider, in addition to the amount paid for the Interconnection Facilities, Distribution Upgrades, and Network Upgrades, an amount equal to (1) the current taxes imposed on Distribution Provider ("Current Taxes") on the excess of (a) the gross income realized by Distribution Provider as a result of payments or property transfers made by Interconnection Customer to Distribution Provider under this GIA (without regard to any payments under this Article 5.17) (the "Gross Income Amount") over (b) the present value of future tax deductions for depreciation that will be available as a result of such payments or property transfers (the "Present Value Depreciation Amount"), plus (2) an additional amount sufficient to permit Distribution Provider to receive and retain, after the payment of all Current Taxes, an amount equal to the net amount described in clause (1).

For this purpose, (i) Current Taxes shall be computed based on Distribution Provider's composite federal and state tax rates at the time the payments or property transfers are received and Distribution Provider will be treated as being subject to tax at the highest marginal rates in effect at that time (the "Current Tax Rate"), and (ii) the Present Value Depreciation Amount shall be computed by discounting Distribution Provider's anticipated tax depreciation deductions as a result of such payments or property transfers by Distribution Provider's current weighted average cost of capital. Thus, the formula for calculating Interconnection Customer's liability to Distribution Owner pursuant to this Article 5.17.4 can be expressed as follows:  $(\text{Current Tax Rate} \times (\text{Gross Income Amount} - \text{Present Value of Tax Depreciation})) / (1 - \text{Current Tax Rate})$ . Interconnection Customer's estimated tax liability in the event taxes are imposed shall be stated in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades.

**5.17.5 Private Letter Ruling or Change or Clarification of Law.** At Interconnection Customer's request and expense, Distribution Provider shall file with the IRS a request for a private letter ruling as to whether any property transferred or sums paid, or to be paid, by Interconnection Customer to Distribution Provider under this GIA are subject to federal income taxation. Interconnection Customer will prepare the initial draft of the request for a private letter ruling, and will certify under penalties of perjury that all facts represented in such request are true and accurate to the best of Interconnection Customer's knowledge. Distribution



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Provider and Interconnection Customer shall cooperate in good faith with respect to the submission of such request.

Distribution Provider shall keep Interconnection Customer fully informed of the status of such request for a private letter ruling and shall execute either a privacy act waiver or a limited power of attorney, in a form acceptable to the IRS, that authorizes Interconnection Customer to participate in all discussions with the IRS regarding such request for a private letter ruling. Distribution Provider shall allow Interconnection Customer to attend all meetings with IRS officials about the request and shall permit Interconnection Customer to prepare the initial drafts of any follow-up letters in connection with the request.

**5.17.6 Subsequent Taxable Events.** If, within 10 years from the date on which the relevant Distribution Provider's Interconnection Facilities are placed in service, (i) Interconnection Customer Breaches the covenants contained in Article 5.17.2, (ii) a "disqualification event" occurs within the meaning of IRS Notice 88-129, or (iii) this GIA terminates and Transmission Provider retains ownership of the Interconnection Facilities, Distribution Upgrades, and Network Upgrades, Interconnection Customer shall pay a tax gross-up for the cost consequences of any current tax liability imposed on Distribution Provider, calculated using the methodology described in Article 5.17.4 and in accordance with IRS Notice 90-60.

**5.17.7 Contests.** In the event any Governmental Authority determines that Distribution Provider's receipt of payments or property constitutes income that is subject to taxation, Distribution Provider shall notify Interconnection Customer, in writing, within thirty (30) Calendar Days of receiving notification of such determination by a Governmental Authority. Upon the timely written request by Interconnection Customer and at Interconnection Customer's sole expense, Distribution Provider may appeal, protest, seek abatement of, or otherwise oppose such determination. Upon Interconnection Customer's written request and sole expense, Distribution Provider may file a claim for refund with respect to any taxes paid under this Article 5.17, whether or not it has received such a determination. Distribution Provider reserves the right to make all decisions with regard to the prosecution of such appeal, protest, abatement or other contest, including the selection of counsel and compromise or settlement of the claim, but Distribution Provider shall keep Interconnection Customer informed, shall consider in good faith suggestions from Interconnection Customer about the conduct of the contest, and shall reasonably permit Interconnection Customer or an Interconnection Customer representative to attend contest proceedings.

Interconnection Customer shall pay to Distribution Provider on a periodic basis, as invoiced by Distribution Provider, Distribution Provider's documented reasonable costs of prosecuting such appeal, protest, abatement or other contest.

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At any time during the contest, Distribution Provider may agree to a settlement either with Interconnection Customer's consent or after obtaining written advice from nationally-recognized tax counsel, selected by Distribution Provider, but reasonably acceptable to Interconnection Customer, that the proposed settlement represents a reasonable settlement given the hazards of litigation. Interconnection Customer's obligation shall be based on the amount of the settlement agreed to by Interconnection Customer, or if a higher amount, so much of the settlement that is supported by the written advice from nationally-recognized tax counsel selected under the terms of the preceding sentence. The settlement amount shall be calculated on a fully-grossed-up basis to cover any related cost consequences of the current tax liability. Any settlement without Interconnection Customer's consent or such written advice will relieve Interconnection Customer from any obligation to indemnify Distribution Provider for the tax at issue in the contest.

**5.17.8 Refund.** In the event that (a) a private letter ruling is issued to Distribution Provider which holds that any amount paid or the value of any property transferred by Interconnection Customer to Distribution Provider under the terms of this GIA is not subject to federal income taxation, (b) any legislative change or administrative announcement, notice, ruling or other determination makes it reasonably clear to Distribution Provider in good faith that any amount paid or the value of any property transferred by Interconnection Customer to Distribution Provider under the terms of this GIA is not taxable to Distribution Provider, (c) any abatement, appeal, protest, or other contest results in a determination that any payments or transfers made by Interconnection Customer to Distribution Provider are not subject to federal income tax, or (d) if Distribution Provider receives a refund from any taxing authority for any overpayment of tax attributable to any payment or property transfer made by Interconnection Customer to Distribution Provider pursuant to this GIA, Distribution Provider shall promptly refund to Interconnection Customer the following:

(i) any payment made by Interconnection Customer under this Article 5.17 for taxes that is attributable to the amount determined to be non-taxable, together with interest thereon,

(ii) interest on any amounts paid by Interconnection Customer to Distribution Provider for such taxes which Distribution Provider did not submit to the taxing authority, calculated using an interest rate equal to one-twelfth of the Federal Reserve three-month Commercial paper Rate – Non-Financial, from the Federal Reserve Statistical Release H.15 (expressed as an annual rate) from the date payment was made by Interconnection Customer to the date Distribution Provider refunds such payment to Interconnection Customer, and

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(iii) with respect to any such taxes paid by Distribution Provider, any refund or credit Distribution Provider receives or to which it may be entitled from any Governmental Authority, interest (or that portion thereof attributable to the payment described in clause (i), above) owed to Distribution Provider for such overpayment of taxes (including any reduction in interest otherwise payable by Distribution Provider to any Governmental Authority resulting from an offset or credit); provided, however, that Distribution Provider will remit such amount promptly to Interconnection Customer only after and to the extent that Distribution Provider has received a tax refund, credit or offset from any Governmental Authority for any applicable overpayment of income tax related to Distribution Provider's Interconnection Facilities.

The intent of this provision is to leave the Parties, to the extent practicable, in the event that no taxes are due with respect to any payment for Interconnection Facilities, Distribution Upgrades, and Network Upgrades hereunder, in the same position they would have been in had no such tax payments been made.

**5.17.9 Taxes Other Than Income Taxes.** Upon the timely request by Interconnection Customer, and at Interconnection Customer's sole expense, Distribution Provider may appeal, protest, seek abatement of, or otherwise contest any tax (other than federal or state income tax) asserted or assessed against Distribution Provider for which Interconnection Customer may be required to reimburse Distribution Provider under the terms of this GIA. Interconnection Customer shall pay to Distribution Provider on a periodic basis, as invoiced by Distribution Provider, Distribution Provider's documented reasonable costs of prosecuting such appeal, protest, abatement, or other contest. Interconnection Customer and Distribution Provider shall cooperate in good faith with respect to any such contest. Unless the payment of such taxes is a prerequisite to an appeal or abatement or cannot be deferred, no amount shall be payable by Interconnection Customer to Distribution Provider for such taxes until they are assessed by a final, non-appealable order by any court or agency of competent jurisdiction. In the event that a tax payment is withheld and ultimately due and payable after appeal, Interconnection Customer will be responsible for all taxes, interest and penalties, other than penalties attributable to any delay caused by Distribution Provider.

**5.17.10 Distribution Owners Who Are Not Distribution Providers.** If Distribution Provider is not the same entity as the Distribution Owner, then (i) all references in this Article 5.17 to Distribution Provider shall be deemed also to refer to and to include the Distribution Owner, as appropriate, and (ii) this GIA shall not become effective until such Distribution Owner shall have agreed in writing to assume all of the duties and obligations of Distribution Provider under this Article 5.17 of this GIA.



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**5.18 Tax Status.** Each Party shall cooperate with the other to maintain the other Party's tax status. Nothing in this GIA is intended to adversely affect any Distribution Provider's tax exempt status with respect to the issuance of bonds including, but not limited to, Local Furnishing Bonds.

**5.19 Modification.**

**5.19.1 General.** Either Party may undertake modifications to its facilities. If a Party plans to undertake a modification that reasonably may be expected to affect the other Party's facilities, that Party shall provide to the other Party sufficient information regarding such modification so that the other Party may evaluate the potential impact of such modification prior to commencement of the work. Such information shall be deemed to be confidential hereunder and shall include information concerning the timing of such modifications and whether such modifications are expected to interrupt the flow of electricity from the Generating Facility. The Party desiring to perform such work shall provide the relevant drawings, plans, and specifications to the other Party at least ninety (90) Calendar Days in advance of the commencement of the work or such shorter period upon which the Parties may agree, which agreement shall not unreasonably be withheld, conditioned or delayed.

In the case of Generating Facility modifications that do not require Interconnection Customer to submit an Interconnection Request, Distribution Provider shall provide, within thirty (30) Calendar Days (or such other time as the Parties may agree), an estimate of any additional modifications to the Distribution System, Distribution Provider's Interconnection Facilities, Distribution Upgrades, or Network Upgrades necessitated by such Interconnection Customer modification and a good faith estimate of the costs thereof.

**5.19.2 Standards.** Any additions, modifications, or replacements made to a Party's facilities shall be designed, constructed and operated in accordance with this GIA and Good Utility Practice.

**5.19.3 Modification Costs.** Interconnection Customer shall not be directly assigned for the costs of any additions, modifications, or replacements that Distribution Provider makes to Distribution Provider's Interconnection Facilities or the Distribution System to facilitate the interconnection of a third party to Distribution Provider's Interconnection Facilities or the Distribution System, or to provide transmission service to a third party under Distribution Provider's applicable tariffs. Interconnection Customer shall be responsible for the costs of any additions, modifications, or replacements to Interconnection Customer's Interconnection Facilities that may be necessary to maintain or upgrade such Interconnection Customer's Interconnection Facilities consistent with Applicable Laws and Regulations, Applicable Reliability Standards or Good Utility Practice.

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**Article 6. Testing and Inspection**

- 6.1 Commissioning Testing and Pre-Commercial Operation Date Testing and Modifications.** Prior to commencing Parallel Operation of a Generating Facility with Distribution Provider's system, Commissioning Testing shall be conducted pursuant to Rule 21. However, Interconnection Customer shall not commence Parallel Operation of its Generating Facility unless it has received Distribution Provider's express written permission to do so. Prior to the Commercial Operation Date, Distribution Provider shall test Distribution Provider's Interconnection Facilities, Distribution Upgrades, and Network Upgrades and Interconnection Customer shall test the Generating Facility and Interconnection Customer's Interconnection Facilities to ensure their safe and reliable operation. Similar testing may be required after initial operation. Each Party shall make any modifications to its facilities that are found to be necessary as a result of such testing. Interconnection Customer shall bear the cost of all such testing and modifications. Interconnection Customer shall generate test energy at the Generating Facility only if it has arranged for the delivery of such test energy.
- 6.2 Post-Commercial Operation Date Testing and Modifications.** Each Party shall at its own expense perform routine inspection and testing of its facilities and equipment in accordance with Good Utility Practice as may be necessary to ensure the continued interconnection of the Generating Facility with the Distribution System in a safe and reliable manner. Each Party shall have the right, upon advance written notice, to require reasonable additional testing of the other Party's facilities, at the requesting Party's expense, as may be in accordance with Good Utility Practice.
- 6.3 Right to Observe Testing.** Each Party shall notify the other Party in advance of its performance of tests of its Interconnection Facilities. The other Party has the right to observe such testing. Costs associated with this Article are subject to the relevant provisions of Rule 21.
- 6.4 Right to Inspect.** Each Party shall have the right, but shall have no obligation to: (i) observe the other Party's tests and/or inspection of any of its System Protection Facilities and other protective equipment, including Power System Stabilizers; (ii) review the settings of the other Party's System Protection Facilities and other protective equipment; and (iii) review the other Party's maintenance records relative to the Interconnection Facilities, the System Protection Facilities and other protective equipment. A Party may exercise these rights from time to time as it deems necessary upon reasonable notice to the other Party. The exercise or non-exercise by a Party of any such rights shall not be construed as an endorsement or confirmation of any element or condition of the Interconnection Facilities or the System Protection Facilities or other protective equipment or the operation thereof, or as a warranty as to the fitness, safety, desirability, or reliability of same. Any information that a Party obtains through the

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exercise of any of its rights under this Article 6.4 shall be deemed to be Confidential Information and treated pursuant to Article 22 of this GIA.

**Article 7. Metering**

- 7.1 General.** Each Party shall comply with any Applicable Reliability Standards and the Applicable Reliability Council requirements. The Interconnection Customer shall comply with the provisions of Rule 21 regarding metering. Unless otherwise agreed by the Parties, Distribution Provider may install additional Metering Equipment at the Point of Interconnection prior to any operation of the Generating Facility and shall own, operate, test and maintain such Metering Equipment. Power flows to and from the Generating Facility shall be measured at or, at Distribution Provider's option, compensated to, the Point of Interconnection. Interconnection Customer's access to meter data shall be provided in accordance with Rule 21. Interconnection Customer shall bear all reasonable documented costs associated with the purchase, installation, operation, testing and maintenance of the Metering Equipment.
- 7.2 Check Meters.** Interconnection Customer, at its option and expense, may install and operate, on its premises and on its side of the Point of Interconnection, one or more check meters to check the CAISO-poled meters or Distribution Provider's meters. Such check meters shall be for check purposes only and shall not be used for the measurement of power flows for purposes of this GIA, except in the case that no other means are available on a temporary basis at the option of the Distribution Provider. The check meters shall be subject at all reasonable times to inspection and examination by Distribution Provider or its designee. The installation, operation and maintenance thereof shall be performed entirely by Interconnection Customer in accordance with Good Utility Practice.
- 7.3 Distribution Provider Retail Metering.** Distribution Provider may install retail revenue quality meters and associated equipment, pursuant to the Distribution Provider's applicable retail tariffs.

**Article 8. Communications**

- 8.1 Interconnection Customer Obligations.** Interconnection Customer shall maintain satisfactory operating communications with Distribution Provider's Distribution System dispatcher or representative designated by Distribution Provider. Interconnection Customer shall provide standard voice line, dedicated voice line and facsimile communications at its Generating Facility control room or central dispatch facility through use of either the public telephone system, or a voice communications system that does not rely on the public telephone system. Interconnection Customer shall also provide the dedicated data circuit(s) necessary to provide Interconnection Customer data to Distribution Provider as set forth in Appendix D, Security Arrangements Details. The data circuit(s) shall extend from the Generating Facility to the location(s) specified by

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Distribution Provider. Any required maintenance of such communications equipment shall be performed by Interconnection Customer. Operational communications shall be activated and maintained under, but not be limited to, the following events: system paralleling or separation, scheduled and unscheduled shutdowns, equipment clearances, and hourly and daily load data.

- 8.2 Telemetry.** The Parties shall comply with the provisions of the Rule 21 regarding telemetry.

Each Party will promptly advise the other Party if it detects or otherwise learns of any metering, telemetry or communications equipment errors or malfunctions that require the attention and/or correction by the other Party. The Party owning such equipment shall correct such error or malfunction as soon as reasonably feasible.

- 8.3 No Annexation.** Any and all equipment placed on the premises of a Party shall be and remain the property of the Party providing such equipment regardless of the mode and manner of annexation or attachment to real property, unless otherwise mutually agreed by the Parties.

**Article 9. Operations**

- 9.1 General.** Each Party shall comply with Applicable Reliability Standards and the Applicable Reliability Council requirements. Each Party shall provide to the other Party all information that may reasonably be required by the other Party to comply with Applicable Laws and Regulations and Applicable Reliability Standards.

- 9.2 [Intentionally Omitted.]**

- 9.3 Distribution Provider Obligations.** Distribution Provider shall cause the Distribution System and Distribution Provider's Interconnection Facilities to be operated, maintained and controlled in a safe and reliable manner and in accordance with this GIA. Distribution Provider may provide operating instructions to Interconnection Customer consistent with this GIA and Distribution Provider's operating protocols and procedures as they may change from time to time. Distribution Provider will consider changes to its operating protocols and procedures proposed by Interconnection Customer.

- 9.4 Interconnection Customer Obligations.** Interconnection Customer shall at its own expense operate, maintain and control the Generating Facility and Interconnection Customer's Interconnection Facilities in a safe and reliable manner and in accordance with this GIA. Interconnection Customer shall operate the Generating Facility and Interconnection Customer's Interconnection Facilities in accordance with all applicable requirements of the Control Area of which it is part, as such requirements are set forth in Appendix C, Interconnection Details, of this GIA. Appendix C, Interconnection Details, will be modified to reflect changes to the requirements as they may change from time to

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time. Either Party may request that the other Party provide copies of the requirements set forth in Appendix C, Interconnection Details, of this GIA.

**9.5 Start-Up and Synchronization.** Consistent with the Parties' mutually acceptable procedures, Interconnection Customer is responsible for the proper synchronization of the Generating Facility to Distribution Provider's Distribution System.

**9.6 Reactive Power.**

**9.6.1 Power Factor Design Criteria.** The Interconnection Customer shall design its Generating Facility to maintain a composite power delivery at continuous rated power output at the Point of Interconnection and the Generating Facility shall be capable of operating within a power factor range of 0.9 leading to 0.9 lagging, unless the Distribution Provider has established different requirements that apply to all similarly situated generators in the balancing authority area on a comparable basis. Operation outside this range is acceptable provided the reactive power of the Generating Facility is used to meet the reactive power needs of the Host Loads or that reactive power is otherwise provided under tariff by Distribution Provider. The Interconnection Customer shall notify Distribution Provider if it is using the Generating Facility for power factor correction. Unless otherwise agreed upon by the Interconnection Customer and Distribution Provider, Generating Facilities shall automatically regulate power factor, not voltage, while operating in parallel with Distribution Provider's Distribution System.

**9.6.2 Governors and Regulators.** Whenever the Generating Facility is operated in parallel with the Distribution System and the speed governors (if installed on the generating unit pursuant to Good Utility Practice) and voltage regulators are capable of operation, Interconnection Customer shall operate the Generating Facility with its speed governors and voltage regulators in a manner consistent with Rule 21.

**9.7 Outages and Interruptions.**

**9.7.1 Outages.**

**9.7.1.1 Outage Authority and Coordination.** Each Party may in accordance with Good Utility Practice in coordination with the other Party remove from service any of its respective Interconnection Facilities, Distribution Upgrades, or Network Upgrades that may impact the other Party's facilities as necessary to perform maintenance or testing or to install or replace equipment. Absent an Emergency, the Party scheduling a removal of such facility(ies) from service will use Reasonable Efforts to schedule such removal on a date and time mutually acceptable to the Parties. In all circumstances, any Party planning to remove such facility(ies) from



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service shall use Reasonable Efforts to minimize the effect on the other Party of such removal.

**9.7.1.2 Outage Schedules.** Interconnection Customer shall submit its planned maintenance schedules for the Generating Facility to Distribution Provider for a minimum of a rolling twenty-four month period. Interconnection Customer shall update its planned maintenance schedules as necessary. Distribution Provider may request Interconnection Customer to reschedule its maintenance as necessary to maintain the reliability of the Distribution System and Transmission System. Distribution Provider shall compensate Interconnection Customer for any additional direct costs that Interconnection Customer incurs as a result of having to reschedule maintenance, including any additional overtime, breaking of maintenance contracts or other costs above and beyond the cost Interconnection Customer would have incurred absent Distribution Provider's request to reschedule maintenance. Interconnection Customer will not be eligible to receive compensation, if during the twelve (12) months prior to the date of the scheduled maintenance, Interconnection Customer had modified its schedule of maintenance activities. Distribution Provider shall have no obligation to pay Interconnection Customer any costs the Interconnection Customer incurs as the result of being directed by the CAISO to reschedule maintenance.

**9.7.1.3 Outage Restoration.** If an outage on a Party's Interconnection Facilities, Distribution Upgrades, or Network Upgrades adversely affects the other Party's operations or facilities, the Party that owns or controls the facility that is out of service shall use Reasonable Efforts to promptly restore such facility(ies) to a normal operating condition consistent with the nature of the outage. The Party that owns or controls the facility that is out of service shall provide the other Party, to the extent such information is known, information on the nature of the Emergency, an estimated time of restoration, and any corrective actions required. Initial verbal notice shall be followed up as soon as practicable with written notice explaining the nature of the outage.

**9.7.2 Interruption of Service.** If required by Good Utility Practice to do so, Distribution Provider may require Interconnection Customer to interrupt or reduce deliveries of electricity if such delivery of electricity could adversely affect Distribution Provider's ability to perform such activities as are necessary to safely and reliably operate and maintain the Distribution System and Transmission System. The following provisions shall apply to any interruption or reduction permitted under this Article 9.7.2:

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- 9.7.2.1** The interruption or reduction shall continue only for so long as reasonably necessary under Good Utility Practice;
- 9.7.2.2** Any such interruption or reduction shall be made on an equitable, non-discriminatory basis with respect to all generating facilities directly connected to the Distribution System;
- 9.7.2.3** When the interruption or reduction must be made under circumstances which do not allow for advance notice, Distribution Provider shall notify Interconnection Customer by telephone as soon as practicable of the reasons for the curtailment, interruption, or reduction, and, if known, its expected duration. Telephone notification shall be followed by written notification as soon as practicable;
- 9.7.2.4** Except during the existence of an Emergency, when the interruption or reduction can be scheduled without advance notice, Distribution Provider shall notify Interconnection Customer in advance regarding the timing of such scheduling and further notify Interconnection Customer of the expected duration. Distribution Provider shall coordinate with Interconnection Customer using Good Utility Practice to schedule the interruption or reduction during periods of least impact to Interconnection Customer and Distribution Provider;
- 9.7.2.5** The Parties shall cooperate and coordinate with each other to the extent necessary in order to restore the Generating Facility, Interconnection Facilities, and the Distribution System and Transmission System to their normal operating state, consistent with system conditions and Good Utility Practice.

**9.7.3 [Intentionally Omitted.]**

**9.7.4 System Protection and Other Control Requirements.**

- 9.7.4.1 System Protection Facilities.** Interconnection Customer shall, at its expense, install, operate and maintain System Protection Facilities as a part of the Generating Facility or Interconnection Customer's Interconnection Facilities. Distribution Provider shall install at Interconnection Customer's expense any System Protection Facilities that may be required on Distribution Provider's Interconnection Facilities, Distribution System, or the Transmission System as a result of the interconnection of the Generating Facility and Interconnection Customer's Interconnection Facilities.

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**9.7.4.2** Each Party's protection facilities shall be designed and coordinated with other systems in accordance with Applicable Reliability Standards, Applicable Reliability Council criteria, and Good Utility Practice.

**9.7.4.3** Each Party shall be responsible for protection of its facilities consistent with Good Utility Practice.

**9.7.4.4** Each Party's protective relay design shall incorporate the necessary test switches to perform the tests required in Article 6. The required test switches will be placed such that they allow operation of lockout relays while preventing breaker failure schemes from operating and causing unnecessary breaker operations and/or the tripping of Interconnection Customer's units.

**9.7.4.5** Each Party will test, operate and maintain System Protection Facilities in accordance with Good Utility Practice and, if applicable, the requirements of the Distribution Provider's Interconnection Handbook.

**9.7.4.6** Prior to the In-Service Date, and again prior to the Commercial Operation Date, each Party or its agent shall perform a complete calibration test and functional trip test of the System Protection Facilities. At intervals suggested by Good Utility Practice, the standards and procedures of the Distribution Provider, including, if applicable, the requirements of the Distribution Provider's Interconnection Handbook, and following any apparent malfunction of the System Protection Facilities, each Party shall perform both calibration and functional trip tests of its System Protection Facilities. These tests do not require the tripping of any in-service generation unit. These tests do, however, require that all protective relays and lockout contacts be activated.

**9.7.5 Requirements for Protection.** In compliance with Good Utility Practice and, if applicable, the requirements of the Distribution Provider's Interconnection Handbook, Interconnection Customer shall provide, install, own, and maintain relays, circuit breakers and all other devices necessary to remove any fault contribution of the Generating Facility to any short circuit occurring on the Distribution System not otherwise isolated by Distribution Provider's equipment, such that the removal of the fault contribution shall be coordinated with the protective requirements of the Distribution System. Such protective equipment shall include, without limitation, a disconnecting device or switch with load-interrupting capability located between the Generating Facility and the Distribution System at a site selected upon mutual agreement (not to be unreasonably withheld, conditioned or delayed) of the Parties. Interconnection Customer shall be responsible for protection of the Generating Facility and Interconnection Customer's other equipment from such conditions as negative



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sequence currents, over- or under-frequency, sudden load rejection, over- or under-voltage, and generator loss-of-field. Interconnection Customer shall be solely responsible to disconnect the Generating Facility and Interconnection Customer's other equipment if conditions on the Distribution System could adversely affect the Generating Facility.

- 9.7.6 Power Quality.** Neither Party's facilities shall cause excessive voltage flicker nor introduce excessive distortion to the sinusoidal voltage or current waves as defined by ANSI Standard C84.1-1989, in accordance with IEEE Standard 519, or any applicable superseding electric industry standard or any alternative Applicable Reliability Standard or Applicable Reliability Council standard. In the event of a conflict among ANSI Standard C84.1-1989, or any applicable superseding electric industry standard, or any alternative Applicable Reliability Standard or Applicable Reliability Council standard, the alternative Applicable Reliability Standard or Applicable Reliability Council standard shall control.
- 9.8 Switching and Tagging Rules.** Each Party shall provide the other Party a copy of its switching and tagging rules that are applicable to the other Party's activities. Such switching and tagging rules shall be developed on a non-discriminatory basis. The Parties shall comply with applicable switching and tagging rules, as amended from time to time, in obtaining clearances for work or for switching operations on equipment.
- 9.9 Use of Interconnection Facilities by Third Parties.**
- 9.9.1 Purpose of Interconnection Facilities.** Except as may be required by Applicable Laws and Regulations, or as otherwise agreed to among the Parties, the Interconnection Facilities shall be constructed for the sole purpose of interconnecting the Generating Facility to the Distribution System and shall be used for no other purpose.
- 9.9.2 Third Party Users.** If required by Applicable Laws and Regulations or if the Parties mutually agree, such agreement not to be unreasonably withheld, to allow one or more third parties to use Distribution Provider's Interconnection Facilities, or any part thereof, Interconnection Customer will be entitled to compensation for the capital expenses it incurred in connection with the Interconnection Facilities based upon the pro rata use of the Interconnection Facilities by Distribution Provider, all third party users, and Interconnection Customer, in accordance with Applicable Laws and Regulations or upon some other mutually-agreed upon methodology. In addition, cost responsibility for ongoing costs, including operation and maintenance costs associated with the Interconnection Facilities, will be allocated between Interconnection Customer and any third party users based upon the pro rata use of the Interconnection Facilities by Distribution Provider, all third party users, and Interconnection Customer, in accordance with Applicable Laws and Regulations or upon some other mutually agreed upon

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methodology. If the issue of such compensation or allocation cannot be resolved through such negotiations, it shall be submitted to CPUC for resolution if the third party user is seeking a CPUC-jurisdictional use and by FERC if the third party user is seeking a FERC-jurisdictional use. Interconnection Customer agrees to be bound by any such resolution by FERC.

- 9.10 Disturbance Analysis Data Exchange.** The Parties will cooperate with one another in the analysis of disturbances to either the Generating Facility or Distribution Provider's Distribution System and Transmission System by gathering and providing access to any information relating to any disturbance, including information from oscillography, protective relay targets, breaker operations and sequence of events records, and any disturbance information required by Good Utility Practice.

**Article 10. Maintenance**

- 10.1 Distribution Provider Obligations.** Distribution Provider shall maintain the Distribution System, Transmission System and Distribution Provider's Interconnection Facilities in a safe and reliable manner and in accordance with this GIA.
- 10.2 Interconnection Customer Obligations.** Interconnection Customer shall maintain the Generating Facility and Interconnection Customer's Interconnection Facilities in a safe and reliable manner and in accordance with this GIA.
- 10.3 Coordination.** The Parties shall confer regularly to coordinate the planning, scheduling and performance of preventive and corrective maintenance on the Generating Facility and the Interconnection Facilities.
- 10.4 Secondary Systems.** Each Party shall cooperate with the other in the inspection, maintenance, and testing of control or power circuits that operate below 600 volts, AC or DC, including, but not limited to, any hardware, control or protective devices, cables, conductors, electric raceways, secondary equipment panels, transducers, batteries, chargers, and voltage and current transformers that directly affect the operation of a Party's facilities and equipment which may reasonably be expected to impact the other Party. Each Party shall provide advance notice to the other Party before undertaking any work on such circuits, especially on electrical circuits involving circuit breaker trip and close contacts, current transformers, or potential transformers.
- 10.5 Operating and Maintenance Expenses.** Subject to the provisions herein addressing the use of facilities by others, and except for operations and maintenance expenses associated with modifications made for providing interconnection or transmission service to a third party and such third party pays for such expenses, Interconnection Customer shall be responsible for all reasonable expenses including overheads, associated with: (1) owning, operating, maintaining, repairing, and replacing Interconnection Customer's

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Interconnection Facilities; and (2) operation, maintenance, repair and replacement of Distribution Provider's Interconnection Facilities.

**Article 11. Performance Obligations**

**11.1 Interconnection Customer Interconnection Facilities.** Interconnection Customer shall design, procure, construct, install, own and/or control Interconnection Customer Interconnection Facilities described in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades, at its sole expense.

**11.2 Distribution Provider's Interconnection Facilities.** Distribution Provider or Distribution Owner shall design, procure, construct, install, own and/or control the Distribution Provider's Interconnection Facilities described in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades, at the sole expense of the Interconnection Customer.

**11.3 Network Upgrades and Distribution Upgrades.** Distribution Provider or Distribution Owner shall design, procure, construct, install, and own the Distribution Upgrades described in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades. Network Upgrades shall be designed, procured, and constructed in accordance with the CAISO Tariff. The Interconnection Customer shall be responsible for all costs related to Distribution Upgrades or Network Upgrades.

**11.4 Transmission Credits.**

**11.4.1 Repayment of Amounts Advanced for Network Upgrades.**

**11.4.1.1** To the extent that the CAISO Tariff provides for cash repayment to interconnection customers for contribution to the cost of Network Upgrades, Interconnection Customer shall be entitled to a cash repayment, equal to the total amount paid to Distribution Provider and Affected System Operator, if any, for the Network Upgrades, including any tax gross-up or other tax-related payments associated with Network Upgrades, and not refunded to Interconnection Customer pursuant to Article 5.17.8 or otherwise, to be paid to Interconnection Customer on a dollar-for-dollar basis for the non-usage sensitive portion of transmission charges, as payments are made under Distribution Provider's Tariff and Affected System's Tariff for transmission services with respect to the Generating Facility. Any repayment shall include interest calculated in accordance with the methodology set forth in FERC's regulations at 18 C.F.R. §35.19a(a)(2)(iii) from the date of any payment for Network Upgrades through the date on which the Interconnection Customer receives a repayment of such payment pursuant to this subparagraph. Interconnection Customer may assign such repayment rights to any

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person. To the extent that the CAISO Tariff does not provide for cash repayment to interconnection customers for contribution to the cost of Network Upgrades, Interconnection Customer is not entitled to a cash repayment for amounts paid to the Distribution Provider and Affected System operator for Network Upgrades, and no cash repayment shall be made pursuant to this Agreement.

**11.4.1.2** If the Interconnection Customer is entitled to a cash repayment pursuant to Article 11.4.1.1, the Interconnection Customer, Distribution Provider, and Affected System Operator may adopt any alternative payment schedule that is mutually agreeable so long as Distribution Provider and Affected System Operator take one of the following actions no later than five years from the Commercial Operation Date: (1) return to Interconnection Customer any amounts advanced for Network Upgrades not previously repaid, or (2) declare in writing that Distribution Provider or Affected System Operator will continue to provide payments to Interconnection Customer on a dollar-for-dollar basis for the non-usage sensitive portion of transmission charges, or develop an alternative schedule that is mutually agreeable and provides for the return of all amounts advanced for Network Upgrades not previously repaid; however, full reimbursement shall not extend beyond twenty (20) years from the Commercial Operation Date.

**11.4.1.3** If the Generating Facility fails to achieve commercial operation, but it or another Generating Facility is later constructed and makes use of the Network Upgrades, Distribution Provider and Affected System Operator shall at that time reimburse Interconnection Customer for the amounts advanced for the Network Upgrades if the Interconnection Customer is entitled to a cash repayment pursuant to Article 11.4.1.1. Before any such reimbursement can occur, the Interconnection Customer, or the entity that ultimately constructs the Generating Facility, if different, is responsible for identifying the entity to which reimbursement must be made.

**11.4.2 Special Provisions for Affected Systems.** Unless Distribution Provider provides, under the GIA, for the repayment of amounts advanced to Affected System Operator for Network Upgrades, Interconnection Customer and Affected System Operator shall enter into an agreement that provides for such repayment. The agreement shall specify the terms governing payments to be made by Interconnection Customer to the Affected System Operator as well as the repayment by the Affected System Operator.

**11.4.3** Notwithstanding any other provision of this GIA, nothing herein shall be construed as relinquishing or foreclosing any rights, including but not limited to firm transmission rights, capacity rights, transmission congestion rights, or

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transmission credits, that Interconnection Customer, shall be entitled to, now or in the future under any other agreement or tariff as a result of, or otherwise associated with, the transmission capacity, if any, created by the Network Upgrades, including the right to obtain cash reimbursements or transmission credits for transmission service that is not associated with the Generating Facility.

- 11.5 Provision of Interconnection Financial Security.** The Interconnection Customer is obligated to provide all necessary Interconnection Financial Security required under Rule 21 Section F.4 if studied under the Independent Study Process. The Interconnection Customer is obligated to provide all necessary Interconnection Financial Security required under Section 4.23 of the GIP if studied under the Transmission Cluster Study Process.

**Article 12. Invoice**

- 12.1 General.** Each Party shall submit to the other Party, on a monthly basis, invoices of amounts due for the preceding month. Each invoice shall state the month to which the invoice applies and fully describe the services and equipment provided. The Parties may discharge mutual debts and payment obligations due and owing to each other on the same date through netting, in which case all amounts a Party owes to the other Party under this GIA, including interest payments or credits, shall be netted so that only the net amount remaining due shall be paid by the owing Party.
- 12.2 Final Invoice.** Within twelve (12) months after completion of the construction of Distribution Provider's Interconnection Facilities, Distribution Upgrades, and the Network Upgrades, Distribution Provider shall provide an invoice of the final cost of the construction of Distribution Provider's Interconnection Facilities, Distribution Upgrades, and the Network Upgrades and shall set forth such costs in sufficient detail to enable Interconnection Customer to compare the actual costs with the estimates and to ascertain deviations, if any, from the cost estimates. Distribution Provider shall refund to Interconnection Customer any amount by which the actual payment by Interconnection Customer for estimated costs exceeds the actual costs of construction within thirty (30) Calendar Days of the issuance of such final construction invoice.
- 12.3 Payment.** Invoices shall be rendered to the paying Party at the address specified in Appendix F. The Party receiving the invoice shall pay the invoice within thirty (30) Calendar Days of receipt. All payments shall be made in immediately available funds payable to the other Party, or by wire transfer to a bank named and account designated by the invoicing Party. Payment of invoices by either Party will not constitute a waiver of any rights or claims either Party may have under this GIA.
- 12.4 Disputes.** In the event of a billing dispute between Distribution Provider and Interconnection Customer, Distribution Provider shall continue to provide Interconnection Service under this GIA as long as Interconnection Customer: (i)



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continues to make all payments not in dispute; and (ii) pays to Distribution Provider or into an independent escrow account the portion of the invoice in dispute, pending resolution of such dispute. If Interconnection Customer fails to meet these two requirements for continuation of service, then Distribution Provider may provide notice to Interconnection Customer of a Default pursuant to Article 17. Within thirty (30) Calendar Days after the resolution of the dispute, the Party that owes money to the other Party shall pay the amount due with interest calculated using an interest rate equal to one-twelfth of the Federal Reserve three-month Commercial paper Rate – Non-Financial, from the Federal Reserve Statistical Release H.15 (expressed as an annual rate).

**Article 13. Emergencies Consistent with Rule 21**

**13.1 Emergencies.** Emergencies shall be handled in a manner consistent with Rule 21.

**Article 14. Regulatory Requirements and Governing Law**

**14.1 Regulatory Requirements.** Each Party's obligations under this GIA shall be subject to its receipt of any required approval or certificate from one or more Governmental Authorities in the form and substance satisfactory to the applying Party, or the Party making any required filings with, or providing notice to, such Governmental Authorities, and the expiration of any time period associated therewith. Each Party shall in good faith seek and use its Reasonable Efforts to obtain such other approvals. Nothing in this GIA shall require Interconnection Customer to take any action that could result in its inability to obtain, or its loss of, status or exemption under the Federal Power Act, the Public Utility Holding Company Act of 1935, as amended, or the Public Utility Regulatory Policies Act of 1978.

**14.2 Governing Law.**

**14.2.1** The validity, interpretation and performance of this GIA and each of its provisions shall be governed by the laws of the state of California, without regard to its conflicts of law principles.

**14.2.2** This GIA is subject to all Applicable Laws and Regulations.

**14.2.3** Each Party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, rules, or regulations of a Governmental Authority.

**Article 15. Notices.**

**15.1 General.** Unless otherwise provided in this GIA, any notice, demand or request required or permitted to be given by either Party to the other and any instrument required or permitted to be tendered or delivered by either Party in writing to the other shall be effective when delivered and may be so given, tendered or delivered, by recognized

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national courier, or by depositing the same with the United States Postal Service with postage prepaid, for delivery by certified or registered mail, addressed to the Party, or personally delivered to the Party, at the address set out in Appendix F, Addresses for Delivery of Notices and Billings.

Either Party may change the notice information in this GIA by giving five (5) Business Days written notice prior to the effective date of the change.

**15.2 Billings and Payments.** Billings and payments shall be sent to the addresses set out in Appendix F.

**15.3 Alternative Forms of Notice.** Any notice or request required or permitted to be given by a Party to the other and not required by this Agreement to be given in writing may be so given by telephone, facsimile or email to the telephone numbers and email addresses set out in Appendix F.

**15.4 Operations and Maintenance Notice.** Each Party shall notify the other Party in writing of the identity of the person(s) that it designates as the point(s) of contact with respect to the implementation of Articles 9 and 10.

**Article 16. Uncontrollable Force**

**16.1 Uncontrollable Force.**

**16.1.1** Economic hardship is not considered an Uncontrollable Force event.

**16.1.2** Neither Party shall be considered to be in Default with respect to any obligation hereunder, (including obligations under Article 4), other than the obligation to pay money when due, if prevented from fulfilling such obligation by Uncontrollable Force. A Party unable to fulfill any obligation hereunder (other than an obligation to pay money when due) by reason of an Uncontrollable Force shall give notice and the full particulars of such Uncontrollable Force to the other Party in writing or by telephone as soon as reasonably possible after the occurrence of the cause relied upon. Telephone notices given pursuant to this article shall be confirmed in writing as soon as reasonably possible and shall specifically state full particulars of the Uncontrollable Force, the time and date when the Uncontrollable Force occurred and when the Uncontrollable Force is reasonably expected to cease. The Party affected shall exercise due diligence to remove such disability with reasonable dispatch, but shall not be required to accede or agree to any provision not satisfactory to it in order to settle and terminate a strike or other labor disturbance.

**Article 17. Default**

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**17.1 Default**

**17.1.1 General.** No Default shall exist where such failure to discharge an obligation (other than the payment of money) is the result of an Uncontrollable Force as defined in this GIA or the result of an act of omission of the other Party. Upon a Breach, the non-breaching Party shall give written notice of such Breach to the breaching Party. Except as provided in Article 17.1.2, the breaching Party shall have thirty (30) Calendar Days from receipt of the Default notice within which to cure such Breach; provided however, if such Breach is not capable of cure within thirty (30) Calendar Days, the breaching Party shall commence such cure within thirty (30) Calendar Days after notice and continuously and diligently complete such cure within ninety (90) Calendar Days from receipt of the Default notice; and, if cured within such time, the Breach specified in such notice shall cease to exist.

**17.1.2 Right to Terminate.** If a Breach is not cured as provided in this article, or if a Breach is not capable of being cured within the period provided for herein, the non-breaching Party shall have the right to declare a Default and terminate this GIA by written notice at any time until cure occurs, and be relieved of any further obligation hereunder and, whether or not that Party terminates this GIA, to recover from the breaching Party all amounts due hereunder, plus all other damages and remedies to which it is entitled at law or in equity. The provisions of this article will survive termination of this GIA.

**Article 18. Indemnity, Consequential Damages and Insurance**

**18.1 Indemnity.** The Parties shall at all times indemnify, defend, and hold the other Party harmless from, any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the other Party's action or inactions of its obligations under this GIA on behalf of the Indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the Indemnified Party.

**18.1.1 Indemnified Person.** If an Indemnified Person is entitled to indemnification under this Article 18 as a result of a claim by a third party, and the Indemnifying Party fails, after notice and reasonable opportunity to proceed under Article 18.1, to assume the defense of such claim, such Indemnified Person may at the expense of the Indemnifying Party contest, settle or consent to the entry of any judgment with respect to, or pay in full, such claim.

**18.1.2 Indemnifying Party.** If an Indemnifying Party is obligated to indemnify and hold any Indemnified Person harmless under this Article 18, the amount owing to



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the Indemnified Person shall be the amount of such Indemnified Person's actual Loss, net of any insurance or other recovery.

**18.1.3 Indemnity Procedures.** Promptly after receipt by an Indemnified Person of any claim or notice of the commencement of any action or administrative or legal proceeding or investigation as to which the indemnity provided for in Article 18.1 may apply, the Indemnified Person shall notify the Indemnifying Party of such fact. Any failure of or delay in such notification shall not affect a Party's indemnification obligation unless such failure or delay is materially prejudicial to the Indemnifying Party.

The Indemnifying Party shall have the right to assume the defense thereof with counsel designated by such Indemnifying Party and reasonably satisfactory to the Indemnified Person. If the defendants in any such action include one or more Indemnified Persons and the Indemnifying Party and if the Indemnified Person reasonably concludes that there may be legal defenses available to it and/or other Indemnified Persons which are different from or additional to those available to the Indemnifying Party, the Indemnified Person shall have the right to select separate counsel to assert such legal defenses and to otherwise participate in the defense of such action on its own behalf. In such instances, the Indemnifying Party shall only be required to pay the fees and expenses of one additional attorney to represent an Indemnified Person or Indemnified Persons having such differing or additional legal defenses.

The Indemnified Person shall be entitled, at its expense, to participate in any such action, suit or proceeding, the defense of which has been assumed by the Indemnifying Party. Notwithstanding the foregoing, the Indemnifying Party (i) shall not be entitled to assume and control the defense of any such action, suit or proceedings if and to the extent that, in the opinion of the Indemnified Person and its counsel, such action, suit or proceeding involves the potential imposition of criminal liability on the Indemnified Person, or there exists a conflict or adversity of interest between the Indemnified Person and the Indemnifying Party, in such event the Indemnifying Party shall pay the reasonable expenses of the Indemnified Person, and (ii) shall not settle or consent to the entry of any judgment in any action, suit or proceeding without the consent of the Indemnified Person, which shall not be reasonably withheld, conditioned or delayed.

**18.2 Consequential Damages.** In no event shall either Party be liable under any provision of this GIA for any losses, damages, costs or expenses for any special, indirect, incidental, consequential, or punitive damages, including but not limited to loss of profit or revenue, loss of the use of equipment, cost of capital, cost of temporary equipment or services, whether based in whole or in part in contract, in tort, including negligence, strict liability, or any other theory of liability; provided, however, that damages for which a Party may

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be liable to the other Party under another agreement will not be considered to be special, indirect, incidental, or consequential damages hereunder.

**18.3 Insurance.** Each party shall, at its own expense, maintain in force throughout the period of this GIA, and until released by the other Party, the following minimum insurance coverages, with insurers authorized to do business in the state where the Point of Interconnection is located:

**18.3.1** Employers' Liability and Workers' Compensation Insurance providing statutory benefits in accordance with the laws and regulations of the state in which the Point of Interconnection is located.

**18.3.2** Commercial General Liability Insurance including premises and operations, personal injury, broad form property damage, broad form blanket contractual liability coverage (including coverage for the contractual indemnification) products and completed operations coverage, coverage for explosion, collapse and underground hazards, independent contractors coverage, coverage for pollution to the extent normally available and punitive damages to the extent normally available and a cross liability endorsement, with minimum limits of One Million Dollars (\$1,000,000) per occurrence/One Million Dollars (\$1,000,000) aggregate combined single limit for personal injury, bodily injury, including death and property damage.

**18.3.3** Comprehensive Automobile Liability Insurance for coverage of owned and non-owned and hired vehicles, trailers or semi-trailers designed for travel on public roads, with a minimum, combined single limit of One Million Dollars (\$1,000,000) per occurrence for bodily injury, including death, and property damage.

**18.3.4** Excess Public Liability Insurance over and above the Employers' Liability Commercial General Liability and Comprehensive Automobile Liability Insurance coverage, with a minimum combined single limit of Twenty Million Dollars (\$20,000,000) per occurrence/Twenty Million Dollars (\$20,000,000) aggregate.

**18.3.5** The Commercial General Liability Insurance, Comprehensive Automobile Insurance and Excess Public Liability Insurance policies shall name the other Party, its parent, associated and Affiliate companies and their respective directors, officers, agents, servants and employees ("Other Party Group") as additional insured. All policies shall contain provisions whereby the insurers waive all rights of subrogation in accordance with the provisions of this GIA against the Other Party Group and provide thirty (30) Calendar Days advance written notice to the Other Party Group prior to anniversary date of cancellation or any material change in coverage or condition.

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- 18.3.6** The Commercial General Liability Insurance, Comprehensive Automobile Liability Insurance and Excess Public Liability Insurance policies shall contain provisions that specify that the policies are primary and shall apply to such extent without consideration for other policies separately carried and shall state that each insured is provided coverage as though a separate policy had been issued to each, except the insurer's liability shall not be increased beyond the amount for which the insurer would have been liable had only one insured been covered. Each Party shall be responsible for its respective deductibles or retentions.
- 18.3.7** The Commercial General Liability Insurance, Comprehensive Automobile Liability Insurance and Excess Public Liability Insurance policies, if written on a Claims First Made Basis, shall be maintained in full force and effect for two (2) years after termination of this GIA, which coverage may be in the form of tail coverage or extended reporting period coverage if agreed by the Parties.
- 18.3.8** The requirements contained herein as to the types and limits of all insurance to be maintained by the Parties are not intended to and shall not in any manner, limit or qualify the liabilities and obligations assumed by the Parties under this GIA.
- 18.3.9** Within ten (10) days following execution of this GIA, and as soon as practicable after the end of each fiscal year or at the renewal of the insurance policy and in any event within ninety (90) days thereafter, each Party shall provide certification of all insurance required in this GIA, executed by each insurer or by an authorized representative of each insurer.
- 18.3.10** Notwithstanding the foregoing, each Party may self-insure to meet the minimum insurance requirements of Articles 18.3.2 through 18.3.8 to the extent it maintains a self-insurance program; provided that, such Party's senior secured debt is rated at investment grade or better by Standard & Poor's and that its self-insurance program meets the minimum insurance requirements of Articles 18.3.2 through 18.3.8. For any period of time that a Party's senior secured debt is unrated by Standard & Poor's or is rated at less than investment grade by Standard & Poor's, such Party shall comply with the insurance requirements applicable to it under Articles 18.3.2 through 18.3.9. In the event that a Party is permitted to self-insure pursuant to this article, it shall notify the other Party that it meets the requirements to self-insure and that its self-insurance program meets the minimum insurance requirements in a manner consistent with that specified in Article 18.3.9.
- 18.3.11** The Parties agree to report to each other in writing as soon as practical all accidents or occurrences resulting in injuries to any person, including death, and any property damage arising out of this GIA.

**Article 19. Assignment**

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**19.1 Assignment.** This GIA may be assigned by either Party only with the written consent of the other; provided that either Party may assign this GIA without the consent of the other Party to any Affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this GIA; and provided further that Interconnection Customer shall have the right to assign this GIA, without the consent of Distribution Provider, for collateral security purposes to aid in providing financing for the Generating Facility, provided that Interconnection Customer will promptly notify Distribution Provider of any such assignment. Any financing arrangement entered into by Interconnection Customer pursuant to this article will provide that prior to or upon the exercise of the secured party's, trustee's or mortgagee's assignment rights pursuant to said arrangement, the secured creditor, the trustee or mortgagee will notify Distribution Provider of the date and particulars of any such exercise of assignment right(s), including providing the Distribution Provider with proof that it meets the requirements of Articles 11.5 and 18.3. Any attempted assignment that violates this article is void and ineffective. Any assignment under this GIA shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

**Article 20. Severability**

**20.1 Severability.** If any provision in this GIA is finally determined to be invalid, void or unenforceable by any court or other Governmental Authority having jurisdiction, such determination shall not invalidate, void or make unenforceable any other provision, agreement or covenant of this GIA; provided that if Interconnection Customer (or any third party, but only if such third party is not acting at the direction of Distribution Provider) seeks and obtains such a final determination with respect to any provision of the Option to Build (Article 5.1.3), then none of these provisions shall thereafter have any force or effect and the Parties' rights and obligations shall be governed solely by the Standard Option (Article 5.1.1).

**Article 21. Comparability**

**21.1 Comparability.** The Parties will comply with all applicable comparability and code of conduct laws, rules and regulations, as amended from time to time.

**Article 22. Confidentiality**

**22.1 Definition of Confidential Information.** The confidentiality provisions applicable to this Agreement are set forth in Rule 21, Section D.7 (Confidentiality) and in the following provisions included in this Article.

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- 22.1.1 Release of Confidential Information.** Neither Party shall release or disclose Confidential Information to any other person, employees, consultants, or to parties who may be or considering providing financing to or equity participation with Interconnection Customer, or to potential purchasers or assignees of Interconnection Customer, on a need-to-know basis in connection with these procedures, unless such person has first been advised of the confidentiality provisions of this Article and has agreed to comply with such provisions. Notwithstanding the foregoing, a Party providing Confidential Information to any person shall remain primarily responsible for any release of Confidential Information in contravention of this Article.
- 22.1.2 Rights.** Each Party retains all rights, title, and interest in the Confidential Information that each Party discloses to the other Party. The disclosure by each Party to the other Party of Confidential Information shall not be deemed a waiver by either Party or any other person or entity of the right to protect the Confidential Information from public disclosure.
- 22.1.3 No Warranties.** By providing Confidential Information, neither Party makes any warranties or representations as to its accuracy or completeness. In addition, by supplying Confidential Information, neither Party obligates itself to provide any particular information or Confidential Information to the other Party nor to enter into any further agreements or proceed with any other relationship or joint venture.
- 22.1.4 Standard of Care.** Each Party shall use at least the same standard of care to protect Confidential Information it receives as it uses to protect its own Confidential Information from unauthorized disclosure, publication or dissemination; however, in no case shall a Party use less than reasonable care in protecting Confidential Information. Each Party may use Confidential Information solely to fulfill its obligations to the other Party under this Agreement or its regulatory requirements.
- 22.1.5 Order of Disclosure.** If a court or a Government Authority or entity with the right, power, and apparent authority to do so requests or requires either Party, by subpoena, oral deposition, interrogatories, requests for production of documents, administrative order, or otherwise, to disclose Confidential Information, that Party shall provide the other Party with prompt notice of such request(s) or requirement(s) so that the other Party may seek an appropriate protective order or waive compliance. Notwithstanding the absence of a protective order or waiver, the Party may disclose such Confidential Information which, in the opinion of its counsel, the Party is legally compelled to disclose. Each Party will use Reasonable Efforts to obtain reliable assurance that confidential treatment will be accorded any Confidential Information so furnished.



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**22.1.6 Remedies.** The Parties agree that monetary damages would be inadequate to compensate a Party for the other Party's Breach of its obligations under this Article. Each Party accordingly agrees that the other Party shall be entitled to equitable relief, by way of injunction or otherwise, if the first Party Breaches or threatens to Breach its obligations under this Article, which equitable relief shall be granted without bond or proof of damages, and the receiving Party shall not plead in defense that there would be an adequate remedy at law. Such remedy shall not be deemed an exclusive remedy for the Breach of this Article, but shall be in addition to all other remedies available at law or in equity. The Parties further acknowledge and agree that the covenants contained herein are necessary for the protection of legitimate business interests and are reasonable in scope. No Party, however, shall be liable for indirect, incidental, or consequential or punitive damages of any nature or kind resulting from or arising in connection with this Article.

**Article 23. Environmental Releases**

**23.1** Each Party shall notify the other Party, first orally and then in writing, of the release of any Hazardous Substances, any asbestos or lead abatement activities, or any type of remediation activities related to the Generating Facility or the Interconnection Facilities, each of which may reasonably be expected to affect the other Party. The notifying Party shall: (i) provide the notice as soon as practicable, provided such Party makes a good faith effort to provide the notice no later than twenty-four hours after such Party becomes aware of the occurrence; and (ii) promptly furnish to the other Party copies of any publicly available reports filed with any Governmental Authorities addressing such events.

**Article 24. Information Requirements**

**24.1 Information Acquisition.** Distribution Provider and Interconnection Customer shall submit specific information regarding the electrical characteristics of their respective facilities to each other as described below and in accordance with Applicable Reliability Standards.

**24.2 Information Submission by Distribution Provider.** The initial information submission by Distribution Provider shall occur no later than one hundred eighty (180) Calendar Days prior to Trial Operation and shall include Distribution System and Transmission System information necessary to allow Interconnection Customer to select equipment and meet any system protection and stability requirements, unless otherwise agreed to by the Parties. On a monthly basis Distribution Provider shall provide Interconnection Customer a status report on the construction and installation of Distribution Provider's Interconnection Facilities, Distribution Upgrades, and Network Upgrades, including, but not limited to, the following information: (1) progress to date; (2) a description of the

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activities since the last report; (3) a description of the action items for the next period; and (4) the delivery status of equipment ordered.

- 24.3 Updated Information Submission by Interconnection Customer.** The updated information submission by Interconnection Customer, including manufacturer information, shall occur no later than one hundred eighty (180) Calendar Days prior to the Trial Operation. If studied under the Transmission Cluster Study Process, Interconnection Customer shall submit a completed copy of the Generating Facility data requirements contained in Appendix 1 to the GIP. If studied under the Independent Study Process, Interconnection Customer shall submit a completed copy of the Generating Facility data requirements contained in the Rule 21 Interconnection Request for Exporting Generating Facilities. It shall also include any additional information provided to Distribution Provider for the Feasibility and Facilities Study. Information in this submission shall be the most current Generating Facility design or expected performance data. Information submitted for stability models shall be compatible with Distribution Provider standard models. If there is no compatible model, Interconnection Customer will work with a consultant mutually agreed to by the Parties to develop and supply a standard model and associated information.

If Interconnection Customer's data is materially different from what was originally provided to Distribution Provider pursuant to the Interconnection Study Agreement between Distribution Provider and Interconnection Customer, then Distribution Provider will conduct appropriate studies to determine the impact on Distribution Provider Distribution System and Transmission System based on the actual data submitted pursuant to this Article 24.3. The Interconnection Customer shall not begin Trial Operation until such studies are completed.

- 24.4 Information Supplementation.** Prior to the Trial Operation Date, the Parties shall supplement their information submissions described above in this Article 24 with any and all “as-built” Generating Facility information or “as-tested” performance information that differs from the initial submissions or, alternatively, written confirmation that no such differences exist. The Interconnection Customer shall conduct tests on the Generating Facility as required by Good Utility Practice such as an open circuit “step voltage” test on the Generating Facility to verify proper operation of the Generating Facility’s automatic voltage regulator.

Unless otherwise agreed, the test conditions shall include: (1) Generating Facility at synchronous speed; (2) automatic voltage regulator on and in voltage control mode; and (3) a five percent change in Generating Facility terminal voltage initiated by a change in the voltage regulators reference voltage. Interconnection Customer shall provide validated test recordings showing the responses of Generating Facility terminal and field voltages. In the event that direct recordings of these voltages is impractical, recordings of other voltages or currents that mirror the response of the Generating Facility’s terminal or field voltage are acceptable if information necessary to translate these alternate quantities

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to actual Generating Facility terminal or field voltages is provided. Generating Facility testing shall be conducted and results provided to Distribution Provider for each individual generating unit in a station.

Subsequent to the Commercial Operation Date, Interconnection Customer shall provide Distribution Provider any information changes due to equipment replacement, repair, or adjustment. Distribution Provider shall provide Interconnection Customer any information changes due to equipment replacement, repair or adjustment in the directly connected substation or any adjacent Distribution Provider-owned substation that may affect Interconnection Customer's Interconnection Facilities equipment ratings, protection or operating requirements. The Parties shall provide such information no later than thirty (30) Calendar Days after the date of the equipment replacement, repair or adjustment.

**Article 25. Information Access and Audit Rights**

- 25.1 Information Access.** Each Party (the "disclosing Party") shall make available to the other Party information that is in the possession of the disclosing Party and is necessary in order for the other Party to: (i) verify the costs incurred by the disclosing Party for which the other Party is responsible under this GIA; and (ii) carry out its obligations and responsibilities under this GIA. The Parties shall not use such information for purposes other than those set forth in this Article 25.1 and to enforce their rights under this GIA.
- 25.2 Reporting of Non-Uncontrollable Force Events.** Each Party (the "notifying Party") shall notify the other Party when the notifying Party becomes aware of its inability to comply with the provisions of this GIA for a reason other than an Uncontrollable Force event. The Parties agree to cooperate with each other and provide necessary information regarding such inability to comply, including the date, duration, reason for the inability to comply, and corrective actions taken or planned to be taken with respect to such inability to comply. Notwithstanding the foregoing, notification, cooperation or information provided under this article shall not entitle the Party receiving such notification to allege a cause for anticipatory breach of this GIA.
- 25.3 Audit Rights.** Subject to the requirements of confidentiality under Article 22 of this GIA, each Party shall have the right, during normal business hours, and upon prior reasonable notice to the other Party, to audit at its own expense the other Party's accounts and records pertaining to either Party's performance or either Party's satisfaction of obligations under this GIA. Such audit rights shall include audits of the other Party's costs, calculation of invoiced amounts, Distribution Provider's efforts to allocate responsibility for interruption or reduction of generation on the Distribution System, and each Party's actions in an Emergency. Any audit authorized by this article shall be performed at the offices where such accounts and records are maintained and shall be limited to those portions of such accounts and records that relate to each Party's performance and satisfaction of obligations under this GIA. Each Party shall keep such



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accounts and records for a period equivalent to the audit rights periods described in Article 25.4.

**25.4 Audit Rights Periods.**

**25.4.1 Audit Rights Period for Construction-Related Accounts and Records.**

Accounts and records related to the design, engineering, procurement, and construction of Distribution Provider's Interconnection Facilities, Distribution Upgrades, and Network Upgrades shall be subject to audit for a period of twenty-four months following Distribution Provider's issuance of a final invoice in accordance with Article 12.2.

**25.4.2 Audit Rights Period for All Other Accounts and Records.** Accounts and records related to either Party's performance or satisfaction of all obligations under this GIA other than those described in Article 25.4.1 shall be subject to audit as follows: (i) for an audit relating to cost obligations, the applicable audit rights period shall be twenty-four months after the auditing Party's receipt of an invoice giving rise to such cost obligations; and (ii) for an audit relating to all other obligations, the applicable audit rights period shall be twenty-four months after the event for which the audit is sought.

**25.5 Audit Results.** If an audit by a Party determines that an overpayment or an underpayment has occurred, a notice of such overpayment or underpayment shall be given to the other Party together with those records from the audit which support such determination.

**Article 26. Subcontractors**

**26.1 General.** Nothing in this GIA shall prevent a Party from utilizing the services of any subcontractor as it deems appropriate to perform its obligations under this GIA; provided, however, that each Party shall require its subcontractors to comply with all applicable terms and conditions of this GIA in providing such services and each Party shall remain primarily liable to the other Party for the performance of such subcontractor.

**26.2 Responsibility of Principal.** The creation of any subcontract relationship shall not relieve the hiring Party of any of its obligations under this GIA. The hiring Party shall be fully responsible to the other Party for the acts or omissions of any subcontractor the hiring Party hires as if no subcontract had been made; provided, however, that in no event shall Distribution Provider be liable for the actions or inactions of Interconnection Customer or its subcontractors with respect to obligations of Interconnection Customer under Article 5 of this GIA. Any applicable obligation imposed by this GIA upon the hiring Party shall be equally binding upon, and shall be construed as having application to, any subcontractor of such Party.

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**26.3 No Limitation by Insurance.** The obligations under this Article 26 will not be limited in any way by any limitation of subcontractor's insurance.

**Article 27. Disputes**

**27.1 Disputes.** Any dispute arising between Distribution Provider and an Interconnection Customer studied under the Independent Study Process regarding a Party's performance of its obligations under this Agreement or requirements related to the interconnection of the Generating Facility shall be resolved according to the procedures in Rule 21. Any dispute arising between Distribution Provider and an Interconnection Customer studied under the Transmission Cluster Study Process regarding a Party's performance of its obligations pursuant to the WDAT Tariff (e.g., any dispute regarding the Application Process, the Transmission Cluster Study Process, including the cost allocation of upgrades, the classification of upgrades as either Distribution Upgrades or Network Upgrades, posting of financial security and refunds) will be resolved pursuant to dispute resolution procedures in the WDAT Tariff. Any other dispute arising between Distribution Provider and an Interconnection Customer studied under the Transmission Cluster Study Process regarding a Party's performance of its obligations related to this Agreement or requirements related to the interconnection of the Generating Facility shall be resolved according to the procedures in Rule 21.

**Article 28. Representations, Warranties, and Covenants**

**28.1 General.** Each Party makes the following representations, warranties and covenants:

**28.1.1 Good Standing.** Such Party is duly organized, validly existing and in good standing under the laws of the state in which it is organized, formed, or incorporated, as applicable; that it is qualified to do business in the state or states in which the Generating Facility, Interconnection Facilities and Network Upgrades owned by such Party, as applicable, are located; and that it has the corporate power and authority to own its properties, to carry on its business as now being conducted and to enter into this GIA and carry out the transactions contemplated hereby and perform and carry out all covenants and obligations on its part to be performed under and pursuant to this GIA.

**28.1.2 Authority.** Such Party has the right, power and authority to enter into this GIA, to become a Party hereto and to perform its obligations hereunder. This GIA is a legal, valid and binding obligation of such Party, enforceable against such Party in accordance with its terms, except as the enforceability thereof may be limited by applicable bankruptcy, insolvency, reorganization or other similar laws affecting creditors' rights generally and by general equitable principles (regardless of whether enforceability is sought in a proceeding in equity or at law).

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**28.1.3 No Conflict.** The execution, delivery and performance of this GIA does not violate or conflict with the organizational or formation documents, or bylaws or operating agreement, of such Party, or any judgment, license, permit, order, material agreement or instrument applicable to or binding upon such Party or any of its assets.

**28.1.4 Consent and Approval.** Such Party has sought or obtained, or, in accordance with this GIA will seek or obtain, each consent, approval, authorization, order, or acceptance by any Governmental Authority in connection with the execution, delivery and performance of this GIA, and it will provide to any Governmental Authority notice of any actions under this GIA that are required by Applicable Laws and Regulations.

**Article 29. [Reserved]**

**Article 30. Miscellaneous**

**30.1 Binding Effect.** This GIA and the rights and obligations hereof, shall be binding upon and shall inure to the benefit of the successors and assigns of the Parties hereto.

**30.2 Conflicts.** In the event of a conflict between this GIA and Rule 21, the terms and provisions of Rule 21 shall prevail. For Interconnection Customers studied under the Transmission Cluster Study Process, in the event of a conflict between applicable provisions of the WDAT Tariff and Rule 21, the provisions of the WDAT Tariff shall prevail with respect to parts of the interconnection process performed under the WDAT Tariff; Rule 21 shall prevail with respect to all other matters.

**30.3 Rules of Interpretation.** This GIA, unless a clear contrary intention appears, shall be construed and interpreted as follows: (1) the singular number includes the plural number and vice versa; (2) reference to any person includes such person's successors and assigns but, in the case of a Party, only if such successors and assigns are permitted by this GIA, and reference to a person in a particular capacity excludes such person in any other capacity or individually; (3) reference to any agreement (including this GIA), document, instrument or tariff means such agreement, document, instrument, or tariff as amended or modified and in effect from time to time in accordance with the terms thereof and, if applicable, the terms hereof; (4) reference to any Applicable Laws and Regulations means such Applicable Laws and Regulations as amended, modified, codified, or reenacted, in whole or in part, and in effect from time to time, including, if applicable, rules and regulations promulgated thereunder; (5) unless expressly stated otherwise, reference to any Article, Section or Appendix means such Article of this GIA or such Appendix to this GIA, as the case may be; (6) "hereunder", "hereof", "herein", "hereto" and words of similar import shall be deemed references to this GIA as a whole and not to any particular Article or other provision hereof or thereof; (7) "including" (and with correlative meaning "include") means including without limiting the generality of any

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description preceding such term; and (8) relative to the determination of any period of time, “from” means “from and including”, “to” means “to but excluding” and “through” means “through and including”.

- 30.4 Entire Agreement.** This GIA, including all incorporated tariff provisions and the Appendices and Schedules attached hereto, constitutes the entire agreement between the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, between the Parties with respect to the subject matter of this GIA. There are no other agreements, representations, warranties, or covenants which constitute any part of the consideration for, or any condition to, either Party’s compliance with its obligations under this GIA.
- 30.5 No Third Party Beneficiaries.** This GIA is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and, where permitted, their assigns.
- 30.6 Waiver.** The failure of a Party to this GIA to insist, on any occasion, upon strict performance of any provision of this GIA will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.
- Any waiver at any time by either Party of its rights with respect to this GIA shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this GIA. Termination or Default of this GIA for any reason by Interconnection Customer shall not constitute a waiver of Interconnection Customer’s legal rights to obtain an interconnection from Distribution Provider. Any waiver of this GIA shall, if requested, be provided in writing.
- 30.7 Headings.** The descriptive headings of the various Articles of this GIA have been inserted for convenience of reference only and are of no significance in the interpretation or construction of this GIA.
- 30.8 Multiple Counterparts.** This GIA may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.
- 30.9 Amendment.** The Parties may by mutual agreement amend this GIA by a written instrument duly executed by the Parties.
- 30.10 Modification by the Parties.** The Parties may by mutual agreement amend the Appendices to this GIA by a written instrument duly executed by the Parties. Such amendment shall become effective and a part of this GIA upon satisfaction of all Applicable Laws and Regulations.

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**30.11 Incorporation of Rule 21 into Agreement and CPUC Modification.** Rule 21, subject to any modifications the CPUC may direct in the exercise of its jurisdiction, is incorporated in its entirety into this GIA. Unless otherwise ordered by the CPUC, this GIA at all times shall be subject to such modifications as the CPUC may direct from time to time in the exercise of its jurisdiction. Notwithstanding the foregoing, if provisions of this GIA or the Parties' obligations are dictated by the WDAT Tariff or the results of the Transmission Cluster Study process under the WDAT Tariff (e.g., provisions related to the classification of upgrades as either Distribution Upgrades or Network Upgrades and the allocation of costs of facilities), they are not subject to modification by the CPUC.

**30.12 No Partnership.** This GIA shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or to impose any partnership obligation or partnership liability upon either Party. Neither Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other Party.

**IN WITNESS WHEREOF**, the Parties have executed this GIA in duplicate originals, each of which shall constitute and be an original effective Agreement between the Parties.

**Pacific Gas and Electric Company,**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**Interconnection Customer** \_\_\_\_\_

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

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**Appendix A to GIA**

**Interconnection Facilities, Network Upgrades and Distribution Upgrades**

**1. Interconnection Facilities:**

**(a) [insert Interconnection Customer's Interconnection Facilities]:**

**(b) [insert Distribution Provider's Interconnection Facilities]:**

**2. Network Upgrades:**

**(a) [insert Stand Alone Network Upgrades]:**

**(b) [insert Other Network Upgrades]:**

**3. Distribution Upgrades:**

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**Appendix B to GIA**

**Milestones**

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**Appendix C to GIA**

**Interconnection Details**



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**Appendix D to GIA**

**Security Arrangements Details**

Infrastructure security of Distribution System and Transmission System equipment and operations and control hardware and software is essential to ensure day-to-day Distribution System reliability and operational security. The CPUC will expect the CAISO, all transmission providers, market participants, and interconnection customers interconnected to the Distribution System and Transmission System to comply with the recommendations offered by the President's Critical Infrastructure Protection Board and, eventually, best practice recommendations from the electric reliability authority. All public utilities will be expected to meet basic standards for system infrastructure and operational security, including physical, operational, and cyber-security practices.

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**Appendix E to GIA**

**Commercial Operation Date**

This Appendix E is a part of the GIA between Distribution Provider and Interconnection Customer.

**[Date]**

**[Distribution Provider Address]**

Re: \_\_\_\_\_ Generating Facility

Dear \_\_\_\_\_:

On **[Date]** **[Interconnection Customer]** has completed Trial Operation of Unit No. \_\_\_\_\_. This letter confirms that **[Interconnection Customer]** commenced Commercial Operation of Unit No. \_\_\_\_ at the Generating Facility, effective as of **[Date plus one day]**.

Thank you.

**[Signature]**

**[Interconnection Customer Representative]**

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**Appendix F to GIA**

**Addresses for Delivery of Notices and Billings**

**Notices:.**

Distribution Provider:

[To be supplied.]

Interconnection Customer:

[To be supplied.]

**Billings and Payments:**

Distribution Provider:

[To be supplied.]

Interconnection Customer:

[To be supplied.]

**Alternative Forms of Delivery of Notices (telephone, facsimile or email):**

Distribution Provider:

[To be supplied.]

Interconnection Customer:

[To be supplied.]

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**Appendix G to GIA**

**Interconnection Customer's Proportional Share of Costs of Network Upgrades for  
Applicable Project Cluster**

APPENDIX 6 to GIP

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~~FERC Electric Tariff, Second Revised Volume No. 5~~

**RULE 21 GENERATOR INTERCONNECTION AGREEMENT (GIA) FOR  
EXPORTING GENERATING FACILITIES INTERCONNECTING UNDER THE  
TRANSMISSION CLUSTER STUDY OR INDEPENDENT STUDY PROCESS**

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**BETWEEN**

**[INTERCONNECTION CUSTOMER]**

**AND**

**PACIFIC GAS AND ELECTRIC COMPANY,**

**PROJECT: [PROJECT NAME]**



**Pacific Gas and  
Electric Company™**

**WE DELIVER ENERGY.™**

**RULE 21  
GENERATOR INTERCONNECTION  
AGREEMENT (GIA) FOR  
EXPORTING GENERATING FACILITIES  
INTERCONNECTING UNDER THE  
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**-GENERATOR INTERCONNECTION AGREEMENT**

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**THIS GENERATOR INTERCONNECTION AGREEMENT** (“GIA” or “Agreement”) is made and entered into this \_\_\_\_ day of \_\_\_\_\_, 20\_\_, by and between \_\_\_\_\_, a \_\_\_\_\_ organized and existing under the laws of the State/Commonwealth of \_\_\_\_\_ (“Interconnection Customer” with a Generating Facility), and ~~Southern California Edison~~ Pacific Gas and Electric Company, a corporation organized and existing under the laws of the State of California (“Distribution Provider and/or Distribution Owner”). Interconnection Customer and Distribution Provider each may be referred to as a “Party” or collectively as the “Parties.” This Agreement shall be used for interconnection to the Distribution System through the Independent Study Process in the Distribution Provider’s California Public Utilities Commission (“CPUC” or “Commission”) approved Electric Rule 21 (“Rule 21”). This Agreement may also be used for interconnection to the Distribution System through the Transmission Cluster Study Process if FERC has approved changes to the Generator Interconnection Procedures set forth in the Distribution Provider’s WDAT Tariff which allow Interconnection Customer to sign this Agreement.

**Recitals**

**WHEREAS**, Distribution Provider operates the Distribution System; and

**WHEREAS**, Interconnection Customer intends to own, lease and/or control and operate the Generating Facility identified in Appendix C to this Agreement; and,

**WHEREAS**, Interconnection Customer and Distribution Provider have agreed to enter into this Agreement for the purpose of interconnecting the Generating Facility with the Distribution System; and,

WHEREAS, the Interconnection Customer’s Interconnection Request was studied under the ☐ Transmission Cluster Study Process or ☐ Independent Study Process [check one]; and,

WHEREAS, the basis for the Parties entering into this Agreement is that Interconnection Customer is a Qualifying Facility (“QF”) and will sell all of its exports to the grid to the Distribution Provider under a power purchase agreement (“PPA”) entered into pursuant to the Public Utility Regulatory Policies Act of 1978 (“PURPA”); or, the basis for the Parties entering into this Agreement is: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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**NOW, THEREFORE**, in consideration of and subject to the mutual covenants contained herein, it is agreed:

When used in this Generator Interconnection Agreement, terms with initial capitalization that are not defined in Article 1 shall have the meanings specified in the Article in which they are used or in Rule 21 or in the Distribution Provider's WDAT Tariff.

**Article 1. Definitions**

**Adverse System Impact** shall mean the negative effects due to technical or operational limits on conductors or equipment being exceeded that may compromise the safety, power quality, and reliability of the electric system.

**Affected System** shall mean an electric system other than the Distribution Provider's Distribution System or Transmission System that may be affected by the proposed interconnection.

**Affected System Operator** shall mean the entity that operates an Affected System.

**Affiliate** shall mean, with respect to a corporation, partnership or other entity, each such other corporation, partnership or other entity that directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, such corporation, partnership or other entity.

**Ancillary Services** shall mean those services that are necessary to support the transmission of capacity and energy from resources to loads while maintaining reliable operation of the Distribution Provider's Distribution System in accordance with Good Utility Practice.

**Applicable Laws and Regulations** shall mean all duly promulgated applicable federal, state and local laws, regulations, rules, ordinances, codes, decrees, judgments, directives, or judicial or administrative orders, permits and other duly authorized actions of any Governmental Authority.

**Applicable Reliability Council** shall mean the reliability council applicable to the Distribution System to which the Generating Facility is directly interconnected.

**Applicable Reliability Standards** shall mean the requirements and guidelines of NERC, the Applicable Reliability Council, and the Control Area of the Distribution System to which the Generating Facility is directly interconnected, including the requirements pursuant to Section 215 of the Federal Power Act.

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Applicant shall mean the entity submitting an Interconnection Request pursuant to Rule 21.

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**Base Case** shall mean data including, but not limited to, base case power flow, short circuit, and stability data bases, underlying load, generation, and transmission facility assumptions, contingency lists, including relevant special protection systems, and transmission diagrams used to perform ~~Phase I Interconnection and Phase II~~ the Interconnection Studies. The Base Case may include Critical Energy Infrastructure Information (as that term is defined by FERC). The Base Case shall include (a) transmission facilities as approved by the Distribution Provider or ISO/CAISO, as applicable, ~~and~~ (b) planned distribution upgrades that may have an impact on the Interconnection Request, (c) Distribution Upgrades and Network Upgrades associated with generating facilities in (iv) below, and (d) generating facilities that (i) are directly interconnected to the Distribution System or ISO/CAISO Grid; (ii) are interconnected to Affected Systems and may have an impact on the Interconnection Request; (iii) have a pending request to interconnect to the Distribution System, Transmission System, or an Affected System; or (iv) are not interconnected to the Distribution System or ISO/CAISO Grid, but are subject to a fully executed generator interconnection agreement (or its equivalent predecessor agreement) or for which an unexecuted generator interconnection agreement (or its equivalent predecessor agreement) has been requested to be filed with FERC.

**Breach** shall mean the failure of a Party to perform or observe any material term or condition of the GIA.

**Breaching Party** shall mean a Party that is in Breach of the GIA.

**Business Day** shall mean Monday through Friday, excluding Federal and State Holidays.

CAISO shall mean the California Independent System Operator Corporation, a state-chartered, nonprofit, corporation that controls certain transmission facilities of all Participating Transmission Owners and dispatches certain generating units and loads.

CAISO Grid shall mean the system of transmission lines and associated facilities of the Participating Transmission Owners that have been placed under the CAISO's Operational Control.

CAISO Tariff shall mean the California Independent System Operator Corporation Operating Agreement and Tariff, as it may be modified from time to time, and accepted by the FERC.

CAISO's Generator Interconnection Procedures (CAISO Tariff GIP) shall mean the procedures included in the CAISO Tariff to interconnect a Generating Facility directly to the CAISO Grid, as such procedures may be modified from time to time, and accepted by FERC.

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**Calendar Day** shall mean any day including Saturday, Sunday or a Federal and State Holiday.

**Commercial Operation** shall mean the status of a Generating Facility that has commenced generating electricity ~~for sale~~, excluding electricity generated during Trial period which the Producer is engaged in on-site test operations and commissioning of the Generating Facility prior to Commercial Operation.

**Commercial Operation Date** ~~of an Electric Generating Unit~~ shall mean the date on which an Electric Generating Unit Generator at a Generating Facility commences Commercial Operation as agreed to by the Parties.

**Commissioning Testing** shall mean testing performed during the commissioning of all or part of a Generating Facility pursuant to Appendix E to the GIA-Rule 21.

~~Confidential Information~~ shall mean any confidential, proprietary or trade secret information of a plan, specification, pattern, procedure, design, device, list, concept, policy or compilation relating to the present or planned business of a Party, which is designated as confidential by the Party supplying the information, whether conveyed orally, electronically, in writing, through inspection, or otherwise.

**Confidential Information:** See Rule 21 Section D.7 and Article 22 of this GIA.

**Construction Activities** shall mean actions by the Distribution Provider that result in irrevocable financial commitments for the purchase of major electrical equipment or land for Distribution Provider's Interconnection Facilities, Distribution Upgrades, or Network Upgrades assigned to the Interconnection Customer that occur after receipt of all appropriate governmental approvals needed for the Distribution Provider's Interconnection Facilities, Distribution Upgrades, or Network Upgrades.

~~Control Area~~ shall mean ~~an electrical system or systems bounded by interconnection metering and telemetry, capable of controlling generation to maintain its interchange schedule with other Control Areas and contributing to frequency regulation of the interconnection. A Control Area must be certified by the Applicable Reliability Council.~~

Control Area shall mean Control Area as defined in the CAISO Tariff.

**Customer** shall mean the entity that receives or is entitled to receive Distribution Service through Distribution Provider's Distribution System or is a retail Customer of Distribution Provider connected to the Transmission System.

**Default** shall mean the failure of a Breaching Party to cure its Breach in accordance with Article 17 of the GIA.

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~~Delivery Network Upgrades shall mean the transmission facilities at or beyond the point where the Distribution Provider's Distribution System interconnects to the ISO Grid, other than Reliability Network Upgrades, identified in the Interconnection Studies to relieve constraints on the ISO Grid.~~

~~Dispute Resolution shall mean the procedure for resolution of a dispute between the Parties in which they will first attempt to resolve the dispute on an informal basis.~~

**Distribution Owner** shall mean an entity that owns, leases or otherwise possesses an interest in the portion of the Distribution System at the Point of Interconnection and may be a Party to the GIA to the extent necessary.

~~Distribution Provider shall mean the public utility (or its designated agent) that owns, controls, or operates transmission or distribution facilities used for the transmission of electricity in interstate commerce and provides transmission service under the Tariff. The term Distribution Provider should be read to include the Distribution Owner when the Distribution Owner is separate from the Distribution Provider.~~

Distribution Provider shall mean Pacific Gas and Electric Company.

**Distribution Provider's Interconnection Facilities** shall mean all facilities and equipment owned, controlled or operated by the Distribution Provider from the Point of Change of Ownership to the Point of Interconnection as identified in Appendix A to the GIA, including any modifications, additions or upgrades to such facilities and equipment. Distribution Provider's Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades.

**Distribution Service** shall mean the ~~wholesale distribution service provided of delivering energy over the Distribution System pursuant to the approved tariffs of the Distribution Provider other than services directly related to the Interconnection of a Generating Facility under the Tariff.~~ Rule 21.

**Distribution System** shall mean ~~those non-ISO transmission~~ all electric wires, equipment, and distribution ~~other facilities owned, controlled and operated by the Distribution Provider that are used to provide, other than Interconnection Facilities or the Transmission System, by which Distribution Provider provides Distribution Service under the Tariff, which facilities and equipment are used to transmit electricity to ultimate usage points such as homes and industries directly from nearby generators or from interchanges with higher voltage transmission networks which transport bulk power over longer distances. The voltage levels at which distribution systems operate differ among areas.~~ its Customers.

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**Distribution Upgrades** shall mean the additions, modifications, and upgrades to the Distribution Provider's Distribution System at or beyond the Point of Interconnection to facilitate interconnection of the Generating Facility and render the ~~transmission service necessary to effect Interconnection Customer's wholesale sale of electricity in interstate commerce.~~ Distribution Service. Distribution Upgrades do not include Interconnection Facilities.

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**Effective Date** shall mean the date on which the GIA becomes effective upon execution by the Parties ~~subject to acceptance by FERC, or if filed unexecuted, upon the date specified by FERC.~~

**Electric Generating Unit**

**Emergency** shall mean whenever in Distribution Provider's discretion an individual electric generator and its associated plant and apparatus whose electrical output is capable of being separately identified and metered.

~~**Emergency** Unsafe Operating Condition shall mean a or other hazardous condition or situation: (1) that in the judgment of the Party making the claim exists or whenever access is necessary for emergency service restoration, and such immediate action is imminently likely necessary to endanger life or property; or (2) that, in the case of a Distribution Provider, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to Distribution Provider's Distribution System, protect persons, Distribution Provider's Interconnection Facilities or the electric systems facilities or property of others to which the Distribution Provider's Distribution System is directly connected; or (3) that, in the case of Interconnection Customer, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Generating Facility or from damage or interference caused by Interconnection Customer's Interconnection Facilities. System restoration and black start shall be considered Emergency Conditions; provided, that Interconnection Customer is not obligated by the GIA to possess black start capability Generating Facility, or the failure of protective device to operate properly, or a malfunction of any electrical system equipment or a component part thereof.~~

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**Engineering & Procurement (E&P) Agreement** shall mean an agreement that authorizes the Distribution Provider to begin engineering and procurement of long lead-time items necessary for the establishment of the interconnection in order to advance the implementation of the Interconnection Request.

**Environmental Law** shall mean Applicable Laws or Regulations relating to pollution or protection of the environment or natural resources.

**Federal Power Act** shall mean the Federal Power Act, as amended, 16 U.S.C. §§ 791a et seq.

**FERC** shall mean the Federal Energy Regulatory Commission (~~Commission~~) or its successor.



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~~Full Capacity Deliverability Status shall mean the condition whereby a Generating Facility interconnected with the Distribution System, under coincident ISO Control Area peak demand and a variety of severely stressed system conditions, can deliver the Generating Facility's full output to the aggregate of load on the ISO Grid, consistent with the ISO's reliability criteria and procedures and the ISO's On-Peak Deliverability Assessment as set forth in Section 4.5.4.2.1 of the GIP.~~

Full Capacity Deliverability Status shall be as defined in the CAISO Tariff.

~~Generating Facility shall mean Interconnection Customer's Electric Generating Unit(s) used all generators, electrical wires, equipment, and other facilities owned or provided by Producer for the production of electricity identified in the Interconnection Request, but shall not include the Interconnection Customer's Interconnection Facilities purpose of producing electric power, including storage.~~

~~Generating Facility Capacity shall mean the net capacity of the Generating Facility and the aggregate net capacity of the Generating Facility where it includes multiple Electric Generating Units Generators.~~

~~Generator shall mean a device converting mechanical, chemical, or solar energy into electrical energy, including all of its protective and control functions and structural appurtenances. One or more Generators comprise a Generating Facility.~~

~~Generator Interconnection Agreement (GIA) shall mean the form of interconnection agreement applicable to an between Distribution Provider and the Producer providing for the Interconnection Request pertaining to a Generating Facility processed pursuant to the Independent Study Process of the Generator a Generating Facility that give certain rights and obligations to effect or end Interconnection Procedures, a pro forma version of which is set forth in Appendix 6 to the GIP.~~

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~~Generator Interconnection Procedures (GIP) shall mean the interconnection procedures applicable to an Interconnection Request pertaining to a Generating Facility set forth in Attachment I of the Distribution Provider's Tariff WDAT Tariff, subject to any modifications FERC may direct in the exercise of its jurisdiction.~~

~~Generator Interconnection Study Process Agreement shall mean the agreement between the Distribution Customer and the Interconnection Customer for conducting the Interconnection Studies for a proposed Generating Facility under the Transmission Cluster Study Process, a pro forma version of which is set forth in Attachment 6 of the GIP.~~

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~~Good Utility Practice shall mean any of the practices, methods and acts engaged in or approved by a significant portion of the electric industry during the relevant time period, or any~~

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of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region.

**Governmental Authority** shall mean any federal, state, local or other governmental regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, or other governmental authority having jurisdiction over the Parties, their respective facilities, or the respective services they provide, and exercising or entitled to exercise any administrative, executive, police, or taxing authority or power; provided, however, that such term does not include Interconnection Customer, Distribution Provider, or any Affiliate thereof.

**Hazardous Substances** shall mean any chemicals, materials or substances defined as or included in the definition of “hazardous substances,” “hazardous wastes,” “hazardous materials,” “hazardous constituents,” “restricted hazardous materials,” “extremely hazardous substances,” “toxic substances,” “radioactive substances,” “contaminants,” “pollutants,” “toxic pollutants” or words of similar meaning and regulatory effect under any applicable Environmental Law, or any other chemical, material or substance, exposure to which is prohibited, limited or regulated by any applicable Environmental Law.

**Independent Study Process** shall mean the interconnection study process set forth in GIP Rule 21, Section 5F.3.d.

**Independent Study Process Study Agreement** shall mean the agreement ~~between the Distribution Customer and entered into by the Interconnection Customer for conducting the and Distribution Provider which sets forth the Parties’ agreement to perform~~ Interconnection Studies ~~for a proposed Generating Facility under the Independent Study Process, a pro forma version of which is set forth in Appendix 4 of the GIP.~~

**Initial Synchronization Date** shall mean the date upon which the Generating Facility is initially synchronized and upon which Trial Operation begins.

**In-Service Date** shall mean the estimated date upon which the Interconnection Customer reasonably expects it will be ready to begin use of the Distribution Provider’s Interconnection Facilities ~~to obtain back feed power.~~

**Interconnection Customer; Interconnected** shall mean ~~any entity, including the Distribution Provider, Distribution Owner or any physical connection of the Affiliates or~~

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~~subsidiaries of either, that proposes to interconnect its~~ Generating Facility in accordance with the requirements of Rule 21 so that Parallel Operation with Distribution Provider's Distribution or Transmission System can occur (has occurred).

**Interconnection Customer:** The definition of "Interconnection Customer" in this Agreement is intended to be identical to and used interchangeably with the ~~Distribution Provider's Distribution System~~ definition of "Producer" in Rule 21.

**Interconnection Customer's Interconnection Facilities** shall mean all facilities and equipment, as identified in Appendix A of the GIA, that are located between the Generating Facility and the Point of Change of Ownership, including any modification, addition, or upgrades to such facilities and equipment necessary to physically and electrically interconnect the Generating Facility to the Distribution Provider's Distribution System. Interconnection Customer's Interconnection Facilities are sole use facilities.

**Interconnection Facilities** shall mean the electrical wires, switches and related equipment that are required in addition to the facilities required to provide electric Distribution Provider's Service to a Customer to allow Interconnection. ~~Interconnection Facilities and the Interconnection Customer's may be located on either side of the Point of Common Coupling as appropriate to their purpose and design. Interconnection Facilities. Collectively, may be integral to a Generating Facility or provided separately. Interconnection Facilities include all facilities and equipment between the Generating Facility and may be owned by either the Point of Interconnection, including any modification, additions or upgrades that are necessary to physically and electrically interconnect the Generating Facility to Producer or the Distribution Provider's Distribution System. Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades Provider.~~

**Interconnection Facilities Study** shall mean a study conducted by the Distribution Provider for an Interconnection Customer under the Independent Study Process to determine a list of facilities (including Distribution Provider's Interconnection Facilities, Distribution Upgrades, and Network Upgrades as identified in the Interconnection System Impact Study), the cost of those facilities, and the time required to interconnect the Generating Facility with the Distribution Provider's Distribution or Transmission System. The scope of the study is defined in GIP Rule 21, Section 5.8.2.1 G.3.c.

**Interconnection Financial Security** ~~shall have the meaning assigned to it: Any of the financial instruments listed in Rule 21 Section 5.9 of the GIPF.4.a.~~

**Interconnection Handbook** shall mean a handbook, developed by the Distribution Provider and posted on the Distribution Provider's website or otherwise made available by the Distribution Provider, describing the technical and operational requirements for wholesale generators and loads connected to the Distribution System, as such handbook may be modified

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or superseded from time to time. Distribution Provider's standards contained in the Interconnection Handbook shall be deemed consistent with Good Utility Practice and Applicable Reliability Standards. In the event of a conflict between the terms of this GIA and the terms of the Distribution Provider's Interconnection Handbook, the terms in this GIA shall govern.

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**Interconnection Request** shall mean an ~~Interconnection Customer's~~ Applicant's request, ~~in the form of Appendix 1 to the GIP, in accordance with the Tariff,~~ to interconnect a new Generating Facility, or to increase the capacity of, or make a Material Modification to the operating characteristics of, an existing Generating Facility that is interconnected with the Distribution Provider's Distribution or Transmission System.

**Interconnection Service** shall mean the service provided by the Distribution Provider associated with interconnecting the Interconnection Customer's Generating Facility to the Distribution Provider's Distribution System and enabling it to receive electric energy and capacity from the Generating Facility at the Point of Interconnection, pursuant to the terms of the GIA and, if applicable, the Distribution Provider's ~~Tariff~~ Rule 21.

~~Interconnection Study~~ **Interconnection Study** shall mean a study to establish the requirements for Interconnection of a Generating Facility with Distribution Provider's Distribution System or Transmission System, pursuant to Rule 21. For an Applicant in the Transmission Cluster Study Process, this shall mean any of the following studies: the Phase I Interconnection Study and the Phase II Interconnection Study described in Section 4.8 of the GIP. For an Applicant in the Independent Study Process, this shall mean any of the following studies: the Interconnection System Impact Study and the Interconnection Facilities Study described in Section 5.8.1 and Section 5.8.2 of the GIP.

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**Interconnection Study Cycle** shall mean all requirements, actions, and respective obligations of the Distribution Provider and Interconnection Customer under the GIP or Rule 21 applicable to an Interconnection Request submitted in a particular Transmission Cluster Application Window through execution by the parties of a GIA.

**Interconnection System Impact Study** shall mean an engineering study conducted by the Distribution Provider for an Interconnection Customer under the Independent Study Process that evaluates the impact of the proposed interconnection on the safety and reliability of Distribution Provider's Distribution System and/or Transmission System and, if applicable, an Affected System. The scope of the study is defined in ~~GIP~~ Rule 21 Section ~~5.8.1-1G.3.c~~.

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**IRS** shall mean the Internal Revenue Service.

**ISO** shall mean the ~~California Independent System Operator Corporation, a state-chartered, nonprofit, corporation that controls certain transmission facilities of all Participating Transmission Owners and dispatches certain generating units and loads.~~

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~~ISO Grid shall mean the system of transmission lines and associated facilities of the  
Participating Transmission Owners that have been placed under the ISO's Operational Control.~~

~~ISO Tariff shall mean the California Independent System Operator Corporation  
Operating Agreement and Tariff, dated March 31, 1997, as it may be modified from time to time,  
and accepted by the FERC.~~

~~ISO's Generator Interconnection Procedures (ISO Tariff GIP) shall mean the  
procedures included in Appendix Y of the ISO Tariff to interconnect a Generating Facility  
directly to the ISO Grid, as such procedures may be modified from time to time, and accepted by  
the Commission.~~

**Loss** shall mean any and all losses relating to injury to or death of any person or damage  
to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all  
other obligations by or to third parties, arising out of or resulting from the other Party's  
performance, or non-performance of its obligations under the GIA on behalf of the indemnifying  
Party, except in cases of gross negligence or intentional wrongdoing by the indemnifying Party.

**Material Modification** shall mean those modifications that have a material impact on ~~the~~  
cost or timing of any Interconnection Request with a later queue priority date or a change in  
Point of Interconnection. A Material Modification does not include a change in ownership of a  
Generating Facility.

**Metering** shall mean the measurement of electrical power in kilowatts (kW) and/or  
energy in kilowatt-hours (kWh), and if necessary, reactive power in kVAR at a point, and its  
display to Distribution Provider, as required by Rule 21.

**Metering Equipment** shall mean all ~~metering equipment installed or to be installed at~~  
~~the Generating Facility pursuant to the GIA at the metering points, hardware, software, including~~  
~~but not limited to instrument transformers, MWh meters, data acquisition equipment,~~  
~~transducers, remote terminal unit, communications equipment, phone lines, and fiber~~  
~~optic meter cabinets, conduit, etc., that are necessary for Metering.~~

**NERC** shall mean the North American Electric Reliability Council or its successor  
organization.

**Network Upgrades** shall mean ~~Delivery~~ Network Upgrades ~~and Reliability Network~~  
~~Upgrades.~~

~~Notice of Dispute shall mean a written notice of a dispute or claim that arises out of or in~~  
~~connection with as defined by the GIA or its performance~~ CAISO Tariff.

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~~**Off Peak Deliverability Assessment** shall mean the technical study performed under  
Section 4.5.4.2.2 of the GIP.~~

~~**On Peak Deliverability Assessment** shall mean the technical study performed under  
Section 4.5.4.2.1 of the GIP.~~

**Operational Control** shall mean the rights of the ISO/CAISO under the Transmission Control Agreement and the ISO/CAISO Tariff to direct the parties to the Transmission Control Agreement how to operate their transmission lines and facilities and other electric plant affecting the reliability of those lines and facilities for the purpose of affording comparable non-discriminatory transmission access and meeting applicable reliability criteria.

**Parallel Operation** shall mean the simultaneous operation of a Generator with power delivered or received by Distribution Provider while Interconnected. For the purpose of Rule 21, Parallel Operation includes only those Generating Facilities that are Interconnected with Distribution Provider's Distribution or Transmission System for more than 60 cycles (one second).

**Participating Transmission Owner** shall mean an entity which (i) owns, operates, and maintains transmission lines and associated facilities and/or has entitlements to use certain transmission lines and associated facilities and (ii) has transferred to the ISO/CAISO operational control of such facilities and/or entitlements to be made part of the ISO/CAISO Grid.

**Party or Parties** shall mean Producer and/or Distribution Provider, ~~Distribution Owner,~~

~~**Phase I Interconnection Customer or any combination**~~ **Study** shall mean an engineering study for Applicants in the Transmission Cluster Study Process as defined in the WDAT Tariff.

**Phase II Interconnection Study** shall mean an engineering and operational study for Applicants in the Transmission Cluster Study Process conducted by the Distribution Provider to determine the Point of the above Interconnection and a list of facilities (including Distribution Provider's Interconnection Facilities, Network Upgrades, Distribution Upgrades, and Stand Alone Network Upgrades), the estimated cost of those facilities, the costs allocated to each project, and the estimated time required to interconnect the Generating Facility(ies) with the Distribution System. The portion of the study required to evaluate the impacts on the CAISO Grid will be coordinated with the CAISO and will be completed in a manner consistent with the CAISO Tariff GIP.

**Point of Change of Ownership** shall mean the point, as set forth in Appendix A to the GIA, where the Interconnection Customer's Interconnection Facilities connect to the Distribution Provider's Interconnection Facilities.

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**Point of Interconnection** shall mean the point, ~~as set forth in Appendix A to the GIA,~~  
where the Interconnection Facilities connect ~~to the~~with Distribution ~~Provider's~~Provider's  
Distribution ~~or Transmission~~ System. ~~This may or may not be coincident with the Point of  
Common Coupling.~~

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**Pre-Construction Activities** shall mean the actions by the Distribution Provider, other  
than those required by an Engineering and Procurement Agreement under Section ~~8F.3.f. of Rule~~  
~~21 or Section 6~~ of the GIP, undertaken prior to Construction Activities in order to prepare for the  
construction of the Distribution Provider's Interconnection Facilities, Distribution Upgrades, or  
Network Upgrades assigned to the Interconnection Customer, including, but not limited to,  
preliminary engineering, permitting activities, environmental analysis, or other activities  
specifically needed to obtain governmental approvals for the Distribution Provider's  
Interconnection Facilities, Distribution Upgrades, or Network Upgrades.

**Producer** shall mean the entity that executes a GIA with Distribution Provider. Producer  
may or may not own or operate the Generating Facility, but is responsible for the rights and  
obligations related to the Generator Interconnection Agreement.

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**Reasonable Efforts** shall mean, with respect to an action required to be attempted or  
taken by a Party under the GIA, efforts that are timely and consistent with Good Utility Practice  
and are otherwise substantially equivalent to those a Party would use to protect its own interests.

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**Reliability Network Upgrades** shall mean the transmission facilities at or beyond the  
point where the Distribution Provider's Distribution System interconnects to the ISO Grid;  
necessary to interconnect one or more Generating Facility(ies) safely and reliably to the ISO  
Grid, which would not have been necessary but for the interconnection of one or more  
Generating Facility(ies), including Network Upgrades necessary to remedy short circuit or  
stability problems, or thermal overloads. ~~Reliability Network Upgrades shall only be deemed  
necessary for thermal overloads, occurring under any system condition, where such thermal  
overloads cannot be adequately mitigated through the ISO's congestion management, operating  
procedures, or special protection systems based on the characteristics of the Generating Facilities  
included in the interconnection Studies, limitations on market models, systems, or information,  
or other factors specifically identified in the Interconnection Studies. Reliability Network  
Upgrades also include, consistent with the Applicable Reliability Council's practice and  
Applicable Reliability Standards, the facilities necessary to mitigate any adverse impact the  
Generating Facility's interconnection may have on a path's Applicable Reliability Council  
rating.~~

~~Results Meeting~~ **Results Meeting** for Applicants in the Transmission Cluster Study  
Process shall mean the meeting among the Distribution Provider, the Interconnection Customer,  
and, if applicable, the CAISO and other Affected System operators to discuss the results of the  
Phase I Interconnection Study as set forth in Section 4.11 of the GIP. Results Meeting for

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Applicants in the Independent Study Process shall mean the meetings among the Distribution Provider, the Interconnection Customer, and, if applicable, the ISO/CAISO to discuss either the results of the Interconnection System Impact Study as set forth in Rule 21 Section 5.8.1.3 of the GIP, d.iii. or the results of the Interconnection Facilities Study as set forth in Rule 21 Section 5.8.2.4 of the GIP3, d.ix.

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Scoping Meeting shall mean the meeting between representatives of the Interconnection Customer and Distribution Provider, and if applicable, the ISO, conducted for the purpose of discussing alternative interconnection options, to exchange information including any transmission data and earlier study evaluations that would be reasonably expected to impact such interconnection options, to analyze such information, and to determine the potential feasible Points of Interconnection.

Site Exclusivity shall mean documentation reasonably demonstrating: (1) For private land: (a) Ownership of, a leasehold interest in, or a right to develop property upon which the Generating Facility will be located consisting of a minimum of 50% of the acreage reasonably necessary to accommodate the Generating Facility; or (b) an option to purchase or acquire a leasehold interest in property upon which the Generating Facility will be located consisting of a minimum of 50% of the acreage reasonably necessary to accommodate the Generating Facility. (2) For Public land, including that controlled or managed by any federal, state or local agency, a final, non appealable permit, license, or other right to use the property for the purpose of generating electric power and in acreage reasonably necessary to accommodate the Generating Facility, which exclusive right to use public land under the management of the federal Bureau of Land Management shall be in a form specified by the Bureau of Land Management.

Stand Alone Network Upgrades shall mean Network Upgrades that an Interconnection Customer may construct without affecting day-to-day operations of the Transmission System during their construction. Both the Distribution Provider and the Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify them in Appendix A to the GIA.

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System Integrity shall mean the condition under which Distribution Provider's Distribution and Transmission System is deemed safe and can reliably perform its intended functions in accordance with the safety and reliability rules of Distribution Provider.

System Protection Facilities shall mean the equipment, including necessary protection signal communications equipment, required to protect (1) the Distribution Provider's Distribution System, the ISO/CAISO Controlled Grid, and Affected Systems from faults or other electrical disturbances occurring at the Generating Facility and (2) the Generating Facility from faults or other electrical system disturbances occurring on the Distribution Provider's Distribution System, the ISO/CAISO Controlled Grid or on other delivery systems or other generating systems to



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which the Distribution Provider's Distribution System and Transmission System is directly connected.

~~**Transmission Cluster Application Window** shall mean a period of time specified by the Wholesale Distribution Access Tariff, the Distribution Provider's Tariff through Provider in which open access transmission service and Interconnection Service are offered. Requests will be accepted for processing under the Transmission Cluster Study Process as filed with FERC, and as amended or supplemented from time to time, or any successor tariff set forth in Section 4.1 of the GIP.~~

**Transmission Cluster Study Process** shall mean the Transmission Cluster Study Process set forth in GIP Section 4.

~~**Transmission Control Agreement** shall mean ISO/CAISO FERC Electric Tariff No. 77, as it may be modified from time to time, and accepted by the FERC, or any successor agreement.~~

**Transmission System** shall mean those transmission facilities owned by the Distribution Provider that have been placed under the ISO's/CAISO's Operational Control and are part of the ISO/CAISO Grid, as defined in the CAISO Tariff.

**Trial Operation** shall mean the period during which Interconnection Customer is engaged in on-site test operations and commissioning of the Generating Facility prior to Commercial Operation.

**Uncontrollable Force** shall mean any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm, flood, earthquake, explosion, breakage or accident to machinery or equipment, any curtailment, order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause beyond the reasonable control of the Distribution Provider or Interconnection Customer which could not be avoided through the exercise of Good Utility Practice. An Uncontrollable Force event does not include acts of negligence or intentional wrongdoing by the Party claiming Uncontrollable Force.

~~**Unsafe Operating Conditions** shall mean conditions that, if left uncorrected, could result in harm to personnel, damage to equipment, loss of System Integrity or operation outside pre-established parameters required by the Generator Interconnection Agreement.~~

~~**WDT Tariff** shall mean the Wholesale Distribution Tariff, the Distribution Provider's Tariff through which open access transmission service and Interconnection Service are offered, as filed with FERC, and as amended or supplemented from time to time, or any successor tariff.~~

**Article 2. Effective Date, Term, and Termination**

Automated Document, Preliminary Statement A

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**2.1 Effective Date.** This GIA shall become effective upon execution by the Parties ~~subject to acceptance by FERC (if applicable), or if filed unexecuted, upon the date specified by FERC. Distribution Provider shall promptly file this GIA with FERC upon execution in accordance with Article 3.1, if required.~~

**2.2 Term of Agreement.** Subject to the provisions of Article 2.3, this GIA shall remain in effect for a period of ~~ten (10)~~ (xx) years from the Effective Date ~~or such other longer period as Interconnection Customer may request (Term to be specified in individual agreements)~~, and shall be automatically renewed for each successive one-year period thereafter.

**2.3 Termination Procedures.**

**2.3.1 Written Notice.** This GIA may be terminated by Interconnection Customer after giving Distribution Provider ninety (90) Calendar Days advance written notice, or by Distribution Provider ~~notifying FERC~~ after the Generating Facility permanently ceases Commercial Operation.

**2.3.2 Default.** Either Party may terminate this GIA in accordance with Article 17.

~~**2.3.3 Suspension of Work.** This GIA may be deemed terminated in accordance with Article 5.16.~~

~~2.3.4~~ **2.3.3 QF Status.** If Rule 21 applicability for this interconnection is based on the Interconnection Customer maintaining QF status and selling all its exports to the grid to Distribution Provider under a PURPA PPA, then this provision applies and Distribution Provider may terminate this GIA if Interconnection Customer fails to maintain its QF status for the term of this GIA or upon termination of the Interconnection Customer's PURPA PPA.

**2.3.3.1** If Section 2.3.3 applies, the Interconnection Customer is responsible for maintaining QF status and must notify Distribution Provider sixty (60) Calendar Days in advance of Interconnection Customer failing to maintain its QF status, selling to a third-party, or termination of its PURPA PPA. If Interconnection Customer fails to provide such notice, it is wholly responsible for any penalties incurred from any Governmental Authority or the CAISO, including penalties and charges incurred by the Distribution Provider as a result of this failure to notify the Distribution Provider.

**2.3.4** If Interconnection Customer is no longer eligible for a Rule 21 interconnection then Distribution Provider may terminate this Agreement.

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**2.3.5** Notwithstanding Articles 2.3.1 and 2.3.2, and 2.3.3, no termination shall become effective until the Parties have complied with all Applicable Laws and Regulations applicable to such termination, ~~including the filing with FERC of a notice of termination of this GIA, which notice has been accepted for filing by FERC,~~ and the Interconnection Customer has fulfilled its termination cost obligations under Article 2.4.

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**2.4 Termination Costs.** ~~If a Party elects to terminate this Agreement pursuant to Article 2.3 above, each Party shall pay all costs incurred (including any cancellation costs relating to orders or contracts for Interconnection Facilities and equipment) or charges assessed by the other Party, as of the date of the other Party's non-terminating Party's receipt of such notice of termination, that are the responsibility of the Terminating Party under this GIA. In the event of termination by a Party, the Parties shall use commercially Reasonable Efforts to mitigate the costs, damages and charges arising as a consequence of termination. Upon termination of this GIA, unless otherwise ordered or approved by FERC;~~

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**2.4.1** With respect to any portion of Distribution Provider's Interconnection Facilities that have not yet been constructed or installed, Distribution Provider shall to the extent possible and with Interconnection Customer's authorization cancel any pending orders of, or return, any materials or equipment for, or contracts for construction of, such facilities; provided that in the event Interconnection Customer elects not to authorize such cancellation, Interconnection Customer shall assume all payment obligations with respect to such materials, equipment, and contracts, and Distribution Provider shall deliver such material and equipment, and, if necessary, assign such contracts, to Interconnection Customer as soon as practicable, at Interconnection Customer's expense. To the extent that Interconnection Customer has already paid Distribution Provider for any or all such costs of materials or equipment not taken by Interconnection Customer, Distribution Provider shall promptly refund such amounts to Interconnection Customer, less any costs, including penalties incurred by Distribution Provider to cancel any pending orders of or return such materials, equipment, or contracts.

If an Interconnection Customer terminates this GIA or its GIA is terminated pursuant to Article 2.3 above, it shall be responsible for all costs incurred in association with that Interconnection Customer's interconnection, including any cancellation costs relating to orders or contracts for Interconnection Facilities and equipment, and other expenses including any Distribution Upgrades and Network Upgrades for which Distribution Provider has incurred expenses and has not been reimbursed by Interconnection Customer.

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**2.4.2** Distribution Provider may, at its option, retain any portion of such materials, equipment, or facilities that Interconnection Customer chooses not to accept delivery of, in which case Distribution Provider shall be responsible for all costs associated with procuring such materials, equipment, or facilities.

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**2.4.3** With respect to any portion of the Interconnection Facilities, and any other facilities already installed or constructed pursuant to the terms of this GIA, Interconnection Customer shall be responsible for all costs associated with the removal, relocation or other disposition or retirement of such materials, equipment, or facilities.

**2.5** **Disconnection.** Upon termination of this GIA, the Parties will take all appropriate steps to disconnect the Generating Facility from the Distribution System. All costs required to effectuate such disconnection shall be borne by the terminating Party, unless such termination resulted from the non-terminating Party's Default of this GIA or such non-terminating Party otherwise is responsible for these costs under this GIA.

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**2.6** **Survival.** This GIA shall continue in effect after termination to the extent necessary to provide for final billings and payments and for costs incurred hereunder, including billings and payments pursuant to this GIA; to permit the determination and enforcement of liability and indemnification obligations arising from acts or events that occurred while this GIA was in effect; and to permit each Party to have access to the lands of the other Party pursuant to this GIA or other applicable agreements, to disconnect, remove or salvage its own facilities and equipment.

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**Article 3. Regulatory Filings ~~[Intentionally Omitted]~~**

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~~**3.1** **Filing.** Distribution Provider shall file this GIA (and any amendment hereto) with the appropriate Governmental Authority, if required. Interconnection Customer may request that any information so provided be subject to the confidentiality provisions of Article 22. If Interconnection Customer has executed this GIA, or any amendment thereto, Interconnection Customer shall reasonably cooperate with Distribution Provider with respect to such filing and to provide any information reasonably requested by Distribution Provider needed to comply with applicable regulatory requirements.~~

**Article 4. Scope of Service**

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**4.1** **Interconnection Service.** Interconnection Service allows Interconnection Customer to connect the Generating Facility to the Distribution System and be eligible to deliver the Generating Facility's output using the capacity of the Distribution System to the ISO/CAISO Grid. To the extent Interconnection Customer wants to receive

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Interconnection Service, Distribution Provider shall construct facilities identified in Appendices A and C that the Distribution Provider is responsible to construct.

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~~**4.1.1 Distribution Service Implications.** Interconnection Customer will be eligible to inject power from the Generating Facility into Distribution Provider's Distribution System pursuant to the Tariff. The Interconnection Customer may not deliver power over the Distribution Provider's Distribution System absent procuring Distribution Service. The Interconnection Customer must apply for Distribution Service pursuant to Section 15.2 of the Tariff and meet the conditions specified in Section 14 of the Tariff to be eligible for Distribution Service.~~

~~**4.1.2 Transmission Service Implications.** Interconnection Service does not necessarily provide Interconnection Customer with the capability to physically deliver the output of its Generating Facility to any particular load on the ISO Grid without incurring congestion costs. In the event of transmission constraints on the ISO Grid, Interconnection Customer's Generating Facility shall be subject to the applicable congestion management procedures in the ISO Tariff in the same manner as all other resources. The Interconnection Customer shall be solely responsible for completing all of the necessary arrangements required under the ISO Tariff to be eligible to schedule the output of its resource.~~

**4.2 Provision of Service.** Distribution Provider shall provide Interconnection Service for the Generating Facility at the Point of Interconnection.

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**4.3 Performance Standards.** Each Party shall perform all of its obligations under this GIA in accordance with Applicable Laws and Regulations, Applicable Reliability Standards, and Good Utility Practice, and to the extent a Party is required or prevented or limited in taking any action by such regulations and standards, such Party shall not be deemed to be in Breach of this GIA for its compliance therewith. If such Party is a Distribution Provider or Distribution Owner, then that Party shall amend the GIA ~~and submit the amendment to FERC for approval.~~

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**4.4 No Distribution Service or Transmission Service.** The execution of this GIA does not constitute a request for, nor the provision of, Distribution Service under ~~the Tariff~~ any tariff or any transmission service under ~~the ISO Tariff~~ any tariff.

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~~**4.5 Interconnection Customer Provided Services.** The services provided by Interconnection Customer under this GIA are set forth in Article 9.6 and Article 13.5.1. Interconnection Customer shall be paid for such services in accordance with Article 11.6.~~

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**Article 5. Interconnection Facilities Engineering, Procurement, and Construction**

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**5.1 Options.** Unless otherwise mutually agreed to between the Parties, Interconnection Customer shall select the In-Service Date, Initial Synchronization Date, and Commercial Operation Date; and either Standard Option or ~~Alternate~~ Option to Build, set forth below for completion of Distribution Provider's Interconnection Facilities, Distribution Upgrades, and Network Upgrades as set forth in Appendix A, Interconnection Facilities, Distribution Upgrades, and Network Upgrades, and such dates and selected option shall be set forth in Appendix B, Milestones.

**5.1.1 Standard Option.** Distribution Provider shall design, procure, and construct Distribution Provider's Interconnection Facilities, ~~and~~ Distribution Upgrades, ~~and~~ Network Upgrades, using Reasonable Efforts to complete Distribution Provider's Interconnection Facilities, ~~and~~ Distribution Upgrades, ~~and~~ by the dates set forth in Appendix B, Milestones. Network Upgrades shall be designed, procured, and constructed in accordance with the CAISO Tariff using Reasonable Efforts to complete Network Upgrades by the dates set forth in Appendix B, Milestones. Distribution Provider shall not be required to undertake any action which is inconsistent with its standard safety practices, its material and equipment specifications, its design criteria and construction procedures, its labor agreements, and Applicable Laws and Regulations. In the event Distribution Provider reasonably expects that it will not be able to complete Distribution Provider's Interconnection Facilities, Distribution Upgrades, and Network Upgrades by the specified dates, Distribution Provider shall promptly provide written notice to Interconnection Customer and shall undertake Reasonable Efforts to meet the earliest dates thereafter.

**5.1.2 ~~Alternate Option.~~** ~~If the dates designated by Interconnection Customer are acceptable to Distribution Provider, Distribution Provider shall so notify Interconnection Customer within thirty (30) Calendar Days, and shall assume responsibility for the design, procurement and construction of Distribution Provider's Interconnection Facilities and Distribution Upgrades by the designated dates.~~

~~If Distribution Provider subsequently fails to complete Distribution Provider's Interconnection Facilities and Distribution Upgrades by the In-Service Date, to the extent necessary to provide back feed power; or fails to complete Network Upgrades by the Initial Synchronization Date to the extent necessary to allow for Trial Operation at full power output, unless other arrangements are made by the Parties for such Trial Operation; or fails to complete the Network Upgrades by the Commercial Operation Date, as such dates are reflected in Appendix B, Milestones; Distribution Provider shall pay Interconnection Customer liquidated damages in accordance with Article 5.3, Liquidated Damages, provided, however,~~

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the dates designated by Interconnection Customer shall be extended day for day  
 for each day that the ISO refuses to grant clearances to install equipment.

**5.1.2 [Intentionally Omitted.]**

**5.1.3 Option to Build.** If the dates designated by Interconnection Customer are not acceptable to Distribution Provider, ~~Distribution Provider shall so notify Interconnection Customer within thirty (30) Calendar Days, and unless~~ and if the Parties agree ~~otherwise~~, Interconnection Customer shall have the option to assume responsibility for the design, procurement and construction of Distribution ~~Provider's~~ Provider's Interconnection Facilities and Stand Alone Network Upgrades ~~on the dates specified in Article 5.1.2. Interconnection Customer's~~ Option to Build and any design, procurement, and construction pursuant to this option shall be subject to the approval of Distribution Provider and the provisions of Rule 21 Section I. Distribution Provider and Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify such Stand Alone Network Upgrades in Appendix A. Except for Stand Alone Network Upgrades, Interconnection Customer shall have no right to construct Network Upgrades under this option. If Distribution Provider does not approve Interconnection's Option to Build, the Standard Option applies.

**5.1.4 Negotiated Option.** If Interconnection Customer elects not to exercise its option under Article 5.1.3, Option to Build, Interconnection Customer shall so notify Distribution Provider within thirty (30) Calendar Days, and the Parties shall in good faith attempt to negotiate terms and conditions (including revision of the specified dates and liquidated damages, the provision of incentives or the procurement and construction of a portion of Distribution Provider's Interconnection Facilities and Stand Alone Network Upgrades by Interconnection Customer) pursuant to which Distribution Provider is responsible for the design, procurement and construction of Distribution Provider's Interconnection Facilities, Distribution Upgrades, and Network Upgrades. If the Parties are unable to reach agreement on such terms and conditions, Distribution Provider shall assume responsibility for the design, procurement and construction of Distribution Provider's Interconnection Facilities, Distribution Upgrades, and Network Upgrades pursuant to 5.1.1, Standard Option.

**5.2 General Conditions Applicable to Option to Build.** If Interconnection Customer assumes responsibility for the design, procurement and construction of Distribution Provider's Interconnection Facilities and Stand Alone Network Upgrades,

(1) Interconnection Customer shall engineer, procure equipment, and construct Distribution Provider's Interconnection Facilities and Stand Alone Network

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Upgrades (or portions thereof) using Good Utility Practice and using standards and specifications provided in advance by Distribution Provider;

(2) Interconnection Customer's engineering, procurement and construction of Distribution Provider's Interconnection Facilities and Stand Alone Network Upgrades shall comply with all requirements of law to which Distribution Provider would be subject in the engineering, procurement or construction of Distribution Provider's Interconnection Facilities and Stand Alone Network Upgrades;

(3) Distribution Provider shall review and approve the engineering design, equipment acceptance tests, and the construction of Distribution Provider's Interconnection Facilities and Stand Alone Network Upgrades;

(4) prior to commencement of construction, Interconnection Customer shall provide to Distribution Provider a schedule for construction of Distribution Provider's Interconnection Facilities and Stand Alone Network Upgrades, and shall promptly respond to requests for information from Distribution Provider;

(5) at any time during construction, Distribution Provider shall have the right to gain unrestricted access to Distribution Provider's Interconnection Facilities and Stand Alone Network Upgrades and to conduct inspections of the same;

(6) at any time during construction, should any phase of the engineering, equipment procurement, or construction of Distribution Provider's Interconnection Facilities and Stand Alone Network Upgrades not meet the standards and specifications provided by Distribution Provider, Interconnection Customer shall be obligated to remedy deficiencies in that portion of Distribution Provider's Interconnection Facilities and Stand Alone Network Upgrades;

(7) Interconnection Customer shall indemnify Distribution Provider for claims arising from Interconnection Customer's construction of Distribution Provider's Interconnection Facilities and Stand Alone Network Upgrades under the terms and procedures applicable to Article 18.1 Indemnity;

(8) Interconnection Customer shall transfer control of Distribution Provider's Interconnection Facilities to the Distribution Provider and shall transfer Operational Control of Stand Alone Network Upgrades to the ~~ISO~~CAISO;

(9) Unless Parties otherwise agree, Interconnection Customer shall transfer ownership of Distribution Provider's Interconnection Facilities and Stand-Alone Network Upgrades to Distribution Provider;

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(10) Distribution Provider shall approve and accept for operation and maintenance Distribution Provider's Interconnection Facilities and Stand Alone Network Upgrades to the extent engineered, procured, and constructed in accordance with this Article 5.2; and

(11) Interconnection Customer shall deliver to Distribution Provider "as-built" drawings, information, and any other documents that are reasonably required by Distribution Provider to assure that the Interconnection Facilities and Stand-Alone Network Upgrades are built to the standards and specifications required by Distribution Provider.

**5.3 Liquidated Damages.** ~~The actual damages to Interconnection Customer, in the event Distribution Provider's Interconnection Facilities, Distribution Upgrades, or Network Upgrades are not completed by the dates designated by Interconnection Customer and accepted by Distribution Provider pursuant to subparagraphs 5.1.2 or 5.1.4, above, may include Interconnection Customer's fixed operation and maintenance costs and lost opportunity costs. Such actual damages are uncertain and impossible to determine at this time. Because of such uncertainty, any liquidated damages paid by Distribution Provider to Interconnection Customer in the event that Distribution Provider does not complete any portion of Distribution Provider's Interconnection Facilities, Distribution Upgrades, or Network Upgrades by the applicable dates, shall be an amount equal to 1/2 of 1 percent per day of the actual cost of Distribution Provider's Interconnection Facilities, Distribution Upgrades, and Network Upgrades, in the aggregate, for which Distribution Provider has assumed responsibility to design, procure and construct.~~

~~However, in no event shall the total liquidated damages exceed 20 percent of the actual cost of Distribution Provider's Interconnection Facilities, Distribution Upgrades, and Network Upgrades for which Distribution Provider has assumed responsibility to design, procure, and construct. The foregoing payments will be made by Distribution Provider to Interconnection Customer as just compensation for the damages caused to Interconnection Customer, which actual damages are uncertain and impossible to determine at this time, and as reasonable liquidated damages, but not as a penalty or a method to secure performance of this GIA. Liquidated damages, when the Parties agree to them, are the exclusive remedy for the Distribution Provider's failure to meet its schedule.~~

~~No liquidated damages shall be paid to Interconnection Customer if: (1) Interconnection Customer is not ready to commence use of Distribution Provider's Interconnection Facilities, Distribution Upgrades, or Network Upgrades to take the delivery of power for the Generating Facility's Trial Operation or to export power from the Generating Facility on the specified dates, unless Interconnection Customer would have been able to~~

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~~commence use of Distribution Provider's Interconnection Facilities, Distribution Upgrades, or Network Upgrades to take the delivery of power for Generating Facility's Trial Operation or to export power from the Generating Facility, but for Distribution Provider's delay; (2) Distribution Provider's failure to meet the specified dates is the result of the action or inaction of Interconnection Customer or any other Interconnection Customer who has entered into a GIA with Distribution Provider, action or inaction by the ISO, or any cause beyond Distribution Provider's reasonable control or reasonable ability to cure; (3) the Interconnection Customer has assumed responsibility for the design, procurement and construction of Distribution Provider's Interconnection Facilities and Stand Alone Network Upgrades; or (4) the Parties have otherwise agreed.~~

**5.3 [Intentionally Omitted.]**

**5.4 Power System Stabilizers.** The Interconnection Customer shall procure, install, maintain and operate Power System Stabilizers in accordance with Applicable Reliability Standards, the guidelines and procedures established by the Applicable Reliability Council, and in accordance with the provisions of Section 4.6.5.1 of the ISO/CAISO Tariff. Distribution Provider reserves the right to reasonably establish minimum acceptable settings for any installed Power System Stabilizers, subject to the design and operating limitations of the Generating Facility. If the Generating Facility's Power System Stabilizers are removed from service or not capable of automatic operation, Interconnection Customer shall immediately notify Distribution Provider and Distribution Provider's system operator, or its designated representative. The requirements of this paragraph shall not apply to wind generators of the induction type.

**5.5 Equipment Procurement.** If responsibility for construction of Distribution Provider's Interconnection Facilities, Distribution Upgrades, or Network Upgrades is to be borne by Distribution Provider, then Distribution Provider shall commence design of Distribution Provider's Interconnection Facilities, Distribution Upgrades, or Network Upgrades and procure necessary equipment as soon as practicable after all of the following conditions are satisfied, unless the Parties otherwise agree in writing:

**5.5.1** Distribution Provider has completed the Interconnection Studies pursuant to the Generator Interconnection Study Process Agreement for Transmission Cluster Study Process Applicants, or Distribution Provider has completed the Interconnection Studies pursuant to the Independent Study Process Study Agreement; for Independent Study Process Applicants.

**5.5.2** Distribution Provider has received written authorization to proceed with design and procurement from Interconnection Customer by the date specified in Appendix B, Milestones; and

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**5.5.3** Interconnection Customer has provided security to Distribution Provider in accordance with Article 11.5 by the dates specified in Appendix B, Milestones.

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**5.6 Construction Commencement.** Distribution Provider shall commence construction of Distribution Provider's Interconnection Facilities, Distribution Upgrades, and Network Upgrades for which it is responsible as soon as practicable after the following additional conditions are satisfied:

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**5.6.1** Approval of the appropriate Governmental Authority has been obtained for any facilities requiring regulatory approval;

**5.6.2** Necessary real property rights and rights-of-way have been obtained, to the extent required for the construction of a discrete aspect of Distribution Provider's Interconnection Facilities, Distribution Upgrades, and Network Upgrades;

**5.6.3** Distribution Provider has received written authorization to proceed with construction from Interconnection Customer by the date specified in Appendix B, Milestones; and

**5.6.4** Interconnection Customer has provided security to Distribution Provider in accordance with Article 11.5 by the dates specified in Appendix B, Milestones.

**5.7 Work Progress.** The Parties will keep each other advised periodically as to the progress of their respective design, procurement and construction efforts. Either Party may, at any time, request a progress report from the other Party. If, at any time, Interconnection Customer determines that the completion of Distribution Provider's Interconnection Facilities will not be required until after the specified In-Service Date, Interconnection Customer will provide written notice to Distribution Provider of such later date upon which the completion of Distribution Provider's Interconnection Facilities will be required.

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**5.8 Information Exchange.** As soon as reasonably practicable after the Effective Date, the Parties shall exchange information regarding the design and compatibility of the Parties' Interconnection Facilities and compatibility of the Interconnection Facilities with Distribution Provider's Distribution System, and shall work diligently and in good faith to make any necessary design changes.

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**5.9 Limited Operation.** If any of Distribution Provider's Interconnection Facilities, Distribution Upgrades, or Network Upgrades are not reasonably expected to be completed prior to the Commercial Operation Date of the Generating Facility, Distribution Provider shall, upon the request and at the expense of Interconnection Customer, perform operating studies on a timely basis to determine the extent to which

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the Generating Facility and Interconnection Customer's Interconnection Facilities may operate prior to the completion of Distribution Provider's Interconnection Facilities, Distribution Upgrades, or Network Upgrades consistent with Applicable Laws and Regulations, Applicable Reliability Standards, Good Utility Practice, and this GIA. Distribution Provider shall permit Interconnection Customer to operate the Generating Facility and Interconnection Customer's Interconnection Facilities in accordance with the results of such studies.

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**5.10 Interconnection Customer's Interconnection Facilities ('ICIF').** Interconnection Customer shall, at its expense, design, procure, construct, own and install the ICIF, as set forth in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades.

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**5.10.1 Interconnection Customer's Interconnection Facility Specifications.**

Interconnection Customer shall submit initial specifications for the ICIF, including System Protection Facilities, to Distribution Provider at least one hundred eighty (180) Calendar Days prior to the Initial Synchronization Date; and final specifications for review and comment at least ninety (90) Calendar Days prior to the Initial Synchronization Date. Distribution Provider shall review such specifications to ensure that the ICIF are compatible with the technical specifications, operational control, and safety requirements of Distribution Provider and comment on such specifications within thirty (30) Calendar Days of Interconnection Customer's submission. All specifications provided hereunder shall be deemed confidential.

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**5.10.2 Distribution Provider's Review.** Distribution Provider's review of Interconnection Customer's final specifications shall not be construed as confirming, endorsing, or providing a warranty as to the design, fitness, safety, durability or reliability of the Generating Facility, or the ICIF. Interconnection Customer shall make such changes to the ICIF as may reasonably be required by Distribution Provider, in accordance with Good Utility Practice, to ensure that the ICIF are compatible with the technical specifications, operational control, and safety requirements of Distribution Provider.

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**5.10.3 ICIF Construction.** The ICIF shall be designed and constructed in accordance with Good Utility Practice. Within one hundred twenty (120) Calendar Days after the Commercial Operation Date, unless the Parties agree on another mutually acceptable deadline, Interconnection Customer shall deliver to Distribution Provider "as-built" drawings, information and documents for the ICIF, such as: a one-line diagram, a site plan showing the Generating Facility and the ICIF, plan and elevation drawings showing the layout of the ICIF, a relay functional diagram, relaying AC and DC schematic wiring diagrams and relay settings for all

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facilities associated with Interconnection Customer's step-up transformers, the facilities connecting the Generating Facility to the step-up transformers and the ICIF, and the impedances (determined by factory tests) for the associated step-up transformers and the Generating Facility. The Interconnection Customer shall provide Distribution Provider specifications for the excitation system, automatic voltage regulator, Generating Facility control and protection settings, transformer tap settings, and communications, if applicable.

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- 5.10.4— Interconnection Customer to Meet Requirements of the Distribution Provider's Interconnection Handbook.** The Interconnection Customer shall comply with the Distribution Provider's Interconnection Handbook. In the event of a conflict between the terms of this GIA and the terms of the Distribution Provider's Interconnection Handbook, the terms in this GIA shall govern.

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- 5.11 Distribution Provider's Interconnection Facilities Construction.** Distribution Provider's Interconnection Facilities shall be designed and constructed in accordance with Good Utility Practice. Upon request, within one hundred twenty (120) Calendar Days after the Commercial Operation Date, unless the Parties agree on another mutually acceptable deadline, Distribution Provider shall deliver to Interconnection Customer the following "as-built" drawings, information and documents for Distribution Provider's Interconnection Facilities ~~include appropriate~~ No as-built drawings ~~and relay diagrams~~ will be provided.

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Distribution Provider will obtain control for operating and maintenance purposes of Distribution Provider's Interconnection Facilities and Stand Alone Network Upgrades upon completion of such facilities. Pursuant to Article 5.2, the ~~ISO~~ CAISO will obtain Operational Control of the Stand Alone Network Upgrades prior to the Commercial Operation Date.

- 5.12 Access Rights.** Upon reasonable notice and supervision by a Party, and subject to any required or necessary regulatory approvals, a Party ("Granting Party") shall furnish at no cost to the other Party ("Access Party") any rights of use, licenses, rights of way and easements with respect to lands owned or controlled by the Granting Party, its agents (if allowed under the applicable agency agreement), or any Affiliate, that are necessary to enable the Access Party to obtain ingress and egress to construct, operate, maintain, repair, test (or witness testing), inspect, replace or remove facilities and equipment to: (i) interconnect the Generating Facility with the Distribution System; (ii) operate and maintain the Generating Facility, the Interconnection Facilities and the Distribution System; and (iii) disconnect or remove the Access Party's facilities and equipment upon termination of this GIA. In exercising such licenses, rights of way and easements, the Access Party shall not unreasonably disrupt or interfere with normal operation of the Granting Party's business and shall adhere to the safety rules and procedures established

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in advance, as may be changed from time to time, by the Granting Party and provided to the Access Party.

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**5.13 Lands of Other Property Owners.** If any part of Distribution Provider or Distribution Owner's Interconnection Facilities, Distribution Upgrades, and/or Network Upgrades is to be installed on property owned by persons other than Interconnection Customer or Distribution Provider or Distribution Owner, Distribution Provider or Distribution Owner shall at Interconnection Customer's expense use efforts, similar in nature and extent to those that it typically undertakes on its own behalf or on behalf of its Affiliates, including use of its eminent domain authority, and to the extent consistent with state law, to procure from such persons any rights of use, licenses, rights of way and easements that are necessary to construct, operate, maintain, test, inspect, replace or remove Distribution Provider or Distribution Owner's Interconnection Facilities, Distribution Upgrades, and/or Network Upgrades upon such property.

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**5.14 Permits.** Distribution Provider or Distribution Owner and Interconnection Customer shall cooperate with each other in good faith in obtaining all permits, licenses and authorizations that are necessary to accomplish the interconnection in compliance with Applicable Laws and Regulations. With respect to this paragraph, Distribution Provider or Distribution Owner shall provide permitting assistance to Interconnection Customer comparable to that provided to Distribution Provider's own, or an Affiliate's generation.

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**5.15 Early Construction of Base Case Facilities.** Interconnection Customer may request Distribution Provider to construct, and Distribution Provider shall construct, using Reasonable Efforts to accommodate Interconnection Customer's In-Service Date, all or any portion of any Distribution Upgrades ~~or Network Upgrades~~ required for Interconnection Customer to be interconnected to the Distribution System which are included in the Base Case of the Facilities Study for Interconnection Customer, and which also are required to be constructed for another Interconnection Customer, but where such construction is not scheduled to be completed in time to achieve Interconnection Customer's In-Service Date. Network Upgrades required for Interconnection Customer to be interconnected to the Distribution System shall be constructed in accordance with the CAISO Tariff. Interconnection Customer shall be responsible for all costs incurred pursuant to this Article 5.15.

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~~**5.16 Suspension.** Interconnection Customer reserves the right, upon written notice to Distribution Provider, to suspend at any time all work by Distribution Provider associated with the construction and installation of Distribution Provider's Interconnection Facilities, Distribution Upgrades, and/or Network Upgrades required under this GIA, with the condition that Distribution System shall be left in a safe and reliable condition in accordance with Good Utility Practice and Distribution Provider's safety and reliability criteria. In such event, Interconnection Customer shall be responsible for all reasonable~~



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and necessary costs which Distribution Provider (i) has incurred pursuant to this GIA prior to the suspension and (ii) incurs in suspending such work, including any costs incurred to perform such work as may be necessary to ensure the safety of persons and property and the integrity of the Distribution System and Transmission System during such suspension and, if applicable, any costs incurred in connection with the cancellation or suspension of material, equipment and labor contracts which Distribution Provider cannot reasonably avoid; provided, however, that prior to canceling or suspending any such material, equipment or labor contract, Distribution Provider shall obtain Interconnection Customer's authorization to do so.

Distribution Provider shall invoice Interconnection Customer for such costs pursuant to Article 12 and shall use due diligence to minimize its costs. In the event Interconnection Customer suspends work by Distribution Provider required under this GIA pursuant to this Article 5.16, and has not requested Distribution Provider to recommence the work or has not itself recommenced work required under this GIA on or before the expiration of three (3) years following commencement of such suspension, this GIA shall be deemed terminated and the Interconnection Customer's responsibility for costs will be determined in accordance with Article 2.4 of this GIA. The three year period shall begin on the date the suspension is requested, or the date of the written notice to Distribution Provider, if no effective date is specified. The maximum three year period shall apply to the projected Commercial Operation Date for the Generating Facility identified in the initial Interconnection Request, without regard to any subsequent changes to the dates set forth in the Interconnection Request, without regard to the milestone schedule dates set forth in Appendix B hereto or any changes to those dates, and without regard to any other scheduled dates for action affecting the Generating Facility, Interconnection Facilities, or Network Upgrades or any changes to those dates.

**5.16 [Intentionally Omitted.]**

**5.17 Taxes.**

**5.17.1 Interconnection Customer Payments Not Taxable.** The Parties intend that all payments or property transfers made by Interconnection Customer to Distribution Provider for the installation of Distribution Provider's Interconnection Facilities, Distribution Upgrades, and the Network Upgrades shall be non-taxable, either as contributions to capital, or as an advance, in accordance with the Internal Revenue Code and any applicable state income tax laws and shall not be taxable as contributions in aid of construction or otherwise under the Internal Revenue Code and any applicable state income tax laws.

**5.17.2 Representations and Covenants.** In accordance with IRS Notice 2001-82 and IRS Notice 88-129, Interconnection Customer represents and covenants that (i) ownership of the electricity generated at the Generating Facility will pass to

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another party prior to the transmission of the electricity on the Distribution System, (ii) for income tax purposes, the amount of any payments and the cost of any property transferred to Distribution Provider for Distribution Provider's Interconnection Facilities will be capitalized by Interconnection Customer as an intangible asset and recovered using the straight-line method over a useful life of twenty (20) years, and (iii) any portion of Distribution Provider's Interconnection Facilities that is a "dual-use intertie," within the meaning of IRS Notice 88-129, is reasonably expected to carry only a de minimis amount of electricity in the direction of the Generating Facility. For this purpose, "de minimis amount" means no more than 5 percent of the total power flows in both directions, calculated in accordance with the "5 percent test" set forth in IRS Notice 88-129. This is not intended to be an exclusive list of the relevant conditions that must be met to conform to IRS requirements for non-taxable treatment.

At Distribution Provider's request, Interconnection Customer shall provide Distribution Provider with a report from an independent engineer confirming its representation in clause (iii), above. Distribution Provider represents and covenants that the cost of Distribution Provider's Interconnection Facilities paid for by Interconnection Customer will have no net effect on the base upon which rates are determined.

**5.17.3 Indemnification for the Cost Consequences of Current Tax Liability Imposed Upon the Distribution Provider.** Notwithstanding Article 5.17.1,

Interconnection Customer shall protect, indemnify and hold harmless Distribution Provider from the cost consequences of any current tax liability imposed against Distribution Provider as the result of payments or property transfers made by Interconnection Customer to Distribution Provider under this GIA for Interconnection Facilities, as well as any interest and penalties, other than interest and penalties attributable to any delay caused by Distribution Provider.

Distribution Provider shall not include a gross-up for the cost consequences of any current tax liability in the amounts it charges Interconnection Customer under this GIA unless (i) Distribution Provider has determined, in good faith, that the payments or property transfers made by Interconnection Customer to Distribution Provider should be reported as income subject to taxation or (ii) any Governmental Authority directs Distribution Provider to report payments or property as income subject to taxation; provided, however, that Distribution Provider may require Interconnection Customer to provide security for Interconnection Facilities, in a form reasonably acceptable to Distribution Provider (such as a parental guarantee or a letter of credit), in an amount equal to the cost consequences of any current tax liability under this Article 5.17. Interconnection Customer shall reimburse Distribution Provider for such costs on

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a fully grossed-up basis, in accordance with Article 5.17.4, within thirty (30) Calendar Days of receiving written notification from Distribution Provider of the amount due, including detail about how the amount was calculated.

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The indemnification obligation shall terminate at the earlier of (1) the expiration of the ten year testing period and the applicable statute of limitation, as it may be extended by Distribution Provider upon request of the IRS, to keep these years open for audit or adjustment, or (2) the occurrence of a subsequent taxable event and the payment of any related indemnification obligations as contemplated by this Article 5.17.

**5.17.4 Tax Gross-Up Amount.** Interconnection Customer's liability for the cost consequences of any current tax liability under this Article 5.17 shall be calculated on a fully grossed-up basis. Except as may otherwise be agreed to by the parties, this means that Interconnection Customer will pay Distribution Provider, in addition to the amount paid for the Interconnection Facilities, Distribution Upgrades, and Network Upgrades, an amount equal to (1) the current taxes imposed on Distribution Provider ("Current Taxes") on the excess of (a) the gross income realized by Distribution Provider as a result of payments or property transfers made by Interconnection Customer to Distribution Provider under this GIA (without regard to any payments under this Article 5.17) (the "Gross Income Amount") over (b) the present value of future tax deductions for depreciation that will be available as a result of such payments or property transfers (the "Present Value Depreciation Amount"), plus (2) an additional amount sufficient to permit Distribution Provider to receive and retain, after the payment of all Current Taxes, an amount equal to the net amount described in clause (1).

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For this purpose, (i) Current Taxes shall be computed based on Distribution Provider's composite federal and state tax rates at the time the payments or property transfers are received and Distribution Provider will be treated as being subject to tax at the highest marginal rates in effect at that time (the "Current Tax Rate"), and (ii) the Present Value Depreciation Amount shall be computed by discounting Distribution Provider's anticipated tax depreciation deductions as a result of such payments or property transfers by Distribution Provider's current weighted average cost of capital. Thus, the formula for calculating Interconnection Customer's liability to Distribution Owner pursuant to this Article 5.17.4 can be expressed as follows:  $(\text{Current Tax Rate} \times (\text{Gross Income Amount} - \text{Present Value of Tax Depreciation})) / (1 - \text{Current Tax Rate})$ . Interconnection Customer's estimated tax liability in the event taxes are imposed shall be stated in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades.

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**5.17.5 Private Letter Ruling or Change or Clarification of Law.** At Interconnection Customer's request and expense, Distribution Provider shall file with the IRS a request for a private letter ruling as to whether any property transferred or sums paid, or to be paid, by Interconnection Customer to Distribution Provider under this GIA are subject to federal income taxation. Interconnection Customer will prepare the initial draft of the request for a private letter ruling, and will certify under penalties of perjury that all facts represented in such request are true and accurate to the best of Interconnection Customer's knowledge. Distribution Provider and Interconnection Customer shall cooperate in good faith with respect to the submission of such request.

Distribution Provider shall keep Interconnection Customer fully informed of the status of such request for a private letter ruling and shall execute either a privacy act waiver or a limited power of attorney, in a form acceptable to the IRS, that authorizes Interconnection Customer to participate in all discussions with the IRS regarding such request for a private letter ruling. Distribution Provider shall allow Interconnection Customer to attend all meetings with IRS officials about the request and shall permit Interconnection Customer to prepare the initial drafts of any follow-up letters in connection with the request.

**5.17.6 Subsequent Taxable Events.** If, within 10 years from the date on which the relevant Distribution Provider's Interconnection Facilities are placed in service, (i) Interconnection Customer Breaches the covenants contained in Article 5.17.2, (ii) a "disqualification event" occurs within the meaning of IRS Notice 88-129, or (iii) this GIA terminates and Transmission Provider retains ownership of the Interconnection Facilities, Distribution Upgrades, and Network Upgrades, Interconnection Customer shall pay a tax gross-up for the cost consequences of any current tax liability imposed on Distribution Provider, calculated using the methodology described in Article 5.17.4 and in accordance with IRS Notice 90-60.

**5.17.7 Contests.** In the event any Governmental Authority determines that Distribution Provider's receipt of payments or property constitutes income that is subject to taxation, Distribution Provider shall notify Interconnection Customer, in writing, within thirty (30) Calendar Days of receiving notification of such determination by a Governmental Authority. Upon the timely written request by Interconnection Customer and at Interconnection Customer's sole expense, Distribution Provider may appeal, protest, seek abatement of, or otherwise oppose such determination. Upon Interconnection Customer's written request and sole expense, Distribution Provider may file a claim for refund with respect to any taxes paid under this Article 5.17, whether or not it has received such a determination. Distribution Provider reserves the right to make all decisions with

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regard to the prosecution of such appeal, protest, abatement or other contest, including the selection of counsel and compromise or settlement of the claim, but Distribution Provider shall keep Interconnection Customer informed, shall consider in good faith suggestions from Interconnection Customer about the conduct of the contest, and shall reasonably permit Interconnection Customer or an Interconnection Customer representative to attend contest proceedings.

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Interconnection Customer shall pay to Distribution Provider on a periodic basis, as invoiced by Distribution Provider, Distribution Provider's documented reasonable costs of prosecuting such appeal, protest, abatement or other contest. At any time during the contest, Distribution Provider may agree to a settlement either with Interconnection Customer's consent or after obtaining written advice from nationally-recognized tax counsel, selected by Distribution Provider, but reasonably acceptable to Interconnection Customer, that the proposed settlement represents a reasonable settlement given the hazards of litigation. Interconnection Customer's obligation shall be based on the amount of the settlement agreed to by Interconnection Customer, or if a higher amount, so much of the settlement that is supported by the written advice from nationally-recognized tax counsel selected under the terms of the preceding sentence. The settlement amount shall be calculated on a fully-grossed-up basis to cover any related cost consequences of the current tax liability. Any settlement without Interconnection Customer's consent or such written advice will relieve Interconnection Customer from any obligation to indemnify Distribution Provider for the tax at issue in the contest.

**5.17.8 Refund.** In the event that (a) a private letter ruling is issued to Distribution Provider which holds that any amount paid or the value of any property transferred by Interconnection Customer to Distribution Provider under the terms of this GIA is not subject to federal income taxation, (b) any legislative change or administrative announcement, notice, ruling or other determination makes it reasonably clear to Distribution Provider in good faith that any amount paid or the value of any property transferred by Interconnection Customer to Distribution Provider under the terms of this GIA is not taxable to Distribution Provider, (c) any abatement, appeal, protest, or other contest results in a determination that any payments or transfers made by Interconnection Customer to Distribution Provider are not subject to federal income tax, or (d) if Distribution Provider receives a refund from any taxing authority for any overpayment of tax attributable to any payment or property transfer made by Interconnection Customer to Distribution Provider pursuant to this GIA, Distribution Provider shall promptly refund to Interconnection Customer the following:

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(i) any payment made by Interconnection Customer under this Article 5.17 for taxes that is attributable to the amount determined to be non-taxable, together with interest thereon,

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(ii) interest on any amounts paid by Interconnection Customer to Distribution Provider for such taxes which Distribution Provider did not submit to the taxing authority, calculated ~~in accordance with the methodology set forth in FERC's regulations at 18 CFR §35.19a(a)(2)(iii) using an interest rate equal to one-twelfth of the Federal Reserve three-month Commercial paper Rate – Non-Financial, from the Federal Reserve Statistical Release H.15 (expressed as an annual rate)~~ from the date payment was made by Interconnection Customer to the date Distribution Provider refunds such payment to Interconnection Customer, and

(iii) with respect to any such taxes paid by Distribution Provider, any refund or credit Distribution Provider receives or to which it may be entitled from any Governmental Authority, interest (or that portion thereof attributable to the payment described in clause (i), above) owed to Distribution Provider for such overpayment of taxes (including any reduction in interest otherwise payable by Distribution Provider to any Governmental Authority resulting from an offset or credit); provided, however, that Distribution Provider will remit such amount promptly to Interconnection Customer only after and to the extent that Distribution Provider has received a tax refund, credit or offset from any Governmental Authority for any applicable overpayment of income tax related to Distribution Provider's Interconnection Facilities.

The intent of this provision is to leave the Parties, to the extent practicable, in the event that no taxes are due with respect to any payment for Interconnection Facilities, Distribution Upgrades, and Network Upgrades hereunder, in the same position they would have been in had no such tax payments been made.

**5.17.9 Taxes Other Than Income Taxes.** Upon the timely request by Interconnection Customer, and at Interconnection Customer's sole expense, Distribution Provider may appeal, protest, seek abatement of, or otherwise contest any tax (other than federal or state income tax) asserted or assessed against Distribution Provider for which Interconnection Customer may be required to reimburse Distribution Provider under the terms of this GIA. Interconnection Customer shall pay to Distribution Provider on a periodic basis, as invoiced by Distribution Provider, Distribution Provider's documented reasonable costs of prosecuting such appeal, protest, abatement, or other contest. Interconnection Customer and Distribution

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Provider shall cooperate in good faith with respect to any such contest. Unless the payment of such taxes is a prerequisite to an appeal or abatement or cannot be deferred, no amount shall be payable by Interconnection Customer to Distribution Provider for such taxes until they are assessed by a final, non-appealable order by any court or agency of competent jurisdiction. In the event that a tax payment is withheld and ultimately due and payable after appeal, Interconnection Customer will be responsible for all taxes, interest and penalties, other than penalties attributable to any delay caused by Distribution Provider.

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**5.17.10 Distribution Owners Who Are Not Distribution Providers.** If Distribution

Provider is not the same entity as the Distribution Owner, then (i) all references in this Article 5.17 to Distribution Provider shall be deemed also to refer to and to include the Distribution Owner, as appropriate, and (ii) this GIA shall not become effective until such Distribution Owner shall have agreed in writing to assume all of the duties and obligations of Distribution Provider under this Article 5.17 of this GIA.

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**5.18 Tax Status.** Each Party shall cooperate with the other to maintain the other Party's tax status. Nothing in this GIA is intended to adversely affect any Distribution Provider's tax exempt status with respect to the issuance of bonds including, but not limited to, Local Furnishing Bonds.

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**5.19 Modification.**

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**5.19.1 General.** Either Party may undertake modifications to its facilities. If a Party plans to undertake a modification that reasonably may be expected to affect the other Party's facilities, that Party shall provide to the other Party sufficient information regarding such modification so that the other Party may evaluate the potential impact of such modification prior to commencement of the work. Such information shall be deemed to be confidential hereunder and shall include information concerning the timing of such modifications and whether such modifications are expected to interrupt the flow of electricity from the Generating Facility. The Party desiring to perform such work shall provide the relevant drawings, plans, and specifications to the other Party at least ninety (90) Calendar Days in advance of the commencement of the work or such shorter period upon which the Parties may agree, which agreement shall not unreasonably be withheld, conditioned or delayed.

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In the case of Generating Facility modifications that do not require Interconnection Customer to submit an Interconnection Request, Distribution Provider shall provide, within thirty (30) Calendar Days (or such other time as the Parties may agree), an estimate of any additional modifications to the Distribution

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System, Distribution Provider's Interconnection Facilities, Distribution Upgrades, or Network Upgrades necessitated by such Interconnection Customer modification and a good faith estimate of the costs thereof.

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**5.19.2 Standards.** Any additions, modifications, or replacements made to a Party's facilities shall be designed, constructed and operated in accordance with this GIA and Good Utility Practice.

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**5.19.3 Modification Costs.** Interconnection Customer shall not be directly assigned for the costs of any additions, modifications, or replacements that Distribution Provider makes to Distribution Provider's Interconnection Facilities or the Distribution System to facilitate the interconnection of a third party to Distribution Provider's Interconnection Facilities or the Distribution System, or to provide transmission service to a third party under Distribution Provider's Tariff, applicable tariffs. Interconnection Customer shall be responsible for the costs of any additions, modifications, or replacements to Interconnection Customer's Interconnection Facilities that may be necessary to maintain or upgrade such Interconnection Customer's Interconnection Facilities consistent with Applicable Laws and Regulations, Applicable Reliability Standards or Good Utility Practice.

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**Article 6. Testing and Inspection**

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~~6.1 Pre-Commercial Operation Date Testing and Modifications.~~ **6.1 Commissioning Testing and Pre-Commercial Operation Date Testing and Modifications.** Prior to commencing Parallel Operation of a Generating Facility with Distribution Provider's system, Commissioning Testing shall be conducted pursuant to Rule 21. However, Interconnection Customer shall not commence Parallel Operation of its Generating Facility unless it has received Distribution Provider's express written permission to do so. Prior to the Commercial Operation Date, Distribution Provider shall test Distribution Provider's Interconnection Facilities, Distribution Upgrades, and Network Upgrades and Interconnection Customer shall test the Generating Facility and Interconnection Customer's Interconnection Facilities to ensure their safe and reliable operation. Similar testing may be required after initial operation. Each Party shall make any modifications to its facilities that are found to be necessary as a result of such testing. Interconnection Customer shall bear the cost of all such testing and modifications. Interconnection Customer shall generate test energy at the Generating Facility only if it has arranged for the delivery of such test energy.

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**6.2 Post-Commercial Operation Date Testing and Modifications.** Each Party shall at its own expense perform routine inspection and testing of its facilities and equipment in accordance with Good Utility Practice as may be necessary to ensure the continued

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interconnection of the Generating Facility with the Distribution System in a safe and reliable manner. Each Party shall have the right, upon advance written notice, to require reasonable additional testing of the other Party's facilities, at the requesting Party's expense, as may be in accordance with Good Utility Practice.

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- 6.3 Right to Observe Testing.** Each Party shall notify the other Party in advance of its performance of tests of its Interconnection Facilities. The other Party has the right, at its own expense, to observe such testing. Costs associated with this Article are subject to the relevant provisions of Rule 21.

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- 6.4 Right to Inspect.** Each Party shall have the right, but shall have no obligation to: (i) observe the other Party's tests and/or inspection of any of its System Protection Facilities and other protective equipment, including Power System Stabilizers; (ii) review the settings of the other Party's System Protection Facilities and other protective equipment; and (iii) review the other Party's maintenance records relative to the Interconnection Facilities, the System Protection Facilities and other protective equipment. A Party may exercise these rights from time to time as it deems necessary upon reasonable notice to the other Party. The exercise or non-exercise by a Party of any such rights shall not be construed as an endorsement or confirmation of any element or condition of the Interconnection Facilities or the System Protection Facilities or other protective equipment or the operation thereof, or as a warranty as to the fitness, safety, desirability, or reliability of same. Any information that a Party obtains through the exercise of any of its rights under this Article 6.4 shall be deemed to be Confidential Information and treated pursuant to Article 22 of this GIA.

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**Article 7. Metering**

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- 7.1 General.** Each Party shall comply with any Applicable Reliability Standards and the Applicable Reliability Council requirements. The Interconnection Customer shall comply with the provisions of the ISO Tariff Rule 21 regarding metering, including Section 10 of the ISO Tariff. Unless otherwise agreed by the Parties, Distribution Provider may install additional Metering Equipment at the Point of Interconnection prior to any operation of the Generating Facility and shall own, operate, test and maintain such Metering Equipment. Power flows to and from the Generating Facility shall be measured at or, at Distribution Provider's option, compensated to, the Point of Interconnection. Interconnection Customer's access to meter data shall be provided in accordance with the ISO Tariff Rule 21. Interconnection Customer shall bear all reasonable documented costs associated with the purchase, installation, operation, testing and maintenance of the Metering Equipment.

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- 7.2 Check Meters.** Interconnection Customer, at its option and expense, may install and operate, on its premises and on its side of the Point of Interconnection, one or more check

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meters to check the ~~ISO~~**CAISO**-polled meters or Distribution Provider's meters. Such check meters shall be for check purposes only and shall not be used for the measurement of power flows for purposes of this GIA, except in the case that no other means are available on a temporary basis at the option of the Distribution Provider. The check meters shall be subject at all reasonable times to inspection and examination by Distribution Provider or its designee. The installation, operation and maintenance thereof shall be performed entirely by Interconnection Customer in accordance with Good Utility Practice.

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**7.3 Distribution Provider Retail Metering.** Distribution Provider may install retail revenue quality meters and associated equipment, pursuant to the Distribution Provider's applicable retail tariffs.

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**Article 8. Communications**

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**8.1 Interconnection Customer Obligations.** Interconnection Customer shall maintain satisfactory operating communications with Distribution Provider's Distribution System dispatcher or representative designated by Distribution Provider. Interconnection Customer shall provide standard voice line, dedicated voice line and facsimile communications at its Generating Facility control room or central dispatch facility through use of either the public telephone system, or a voice communications system that does not rely on the public telephone system. Interconnection Customer shall also provide the dedicated data circuit(s) necessary to provide Interconnection Customer data to Distribution Provider as set forth in Appendix D, Security Arrangements Details. The data circuit(s) shall extend from the Generating Facility to the location(s) specified by Distribution Provider. Any required maintenance of such communications equipment shall be performed by Interconnection Customer. Operational communications shall be activated and maintained under, but not be limited to, the following events: system paralleling or separation, scheduled and unscheduled shutdowns, equipment clearances, and hourly and daily load data.

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~~**8.2 Remote Terminal Unit.** Prior to the Initial Synchronization Date of the Generating Facility, a Remote Terminal Unit, or equivalent data collection and transfer equipment acceptable to the Parties, shall be installed by Interconnection Customer, or by Distribution Provider at Interconnection Customer's expense, to gather accumulated and instantaneous data to be telemetered to the location(s) designated by Distribution Provider through use of a dedicated point to point data circuit(s) as indicated in Article 8.1. The communication protocol for the data circuit(s) shall be specified by Distribution Provider. Instantaneous bi-directional analog real power and reactive power flow information must be telemetered directly to the location(s) specified by Distribution Provider.~~



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**8.2 Telemetering.** The Parties shall comply with the provisions of the Rule 21 regarding telemetering.

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Each Party will promptly advise the other Party if it detects or otherwise learns of any metering, telemetry or communications equipment errors or malfunctions that require the attention and/or correction by the other Party. The Party owning such equipment shall correct such error or malfunction as soon as reasonably feasible.

**8.3 No Annexation.** Any and all equipment placed on the premises of a Party shall be and remain the property of the Party providing such equipment regardless of the mode and manner of annexation or attachment to real property, unless otherwise mutually agreed by the Parties.

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**Article 9. Operations**

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**9.1 General.** Each Party shall comply with Applicable Reliability Standards and the Applicable Reliability Council requirements. Each Party shall provide to the other Party all information that may reasonably be required by the other Party to comply with Applicable Laws and Regulations and Applicable Reliability Standards.

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~~**9.2 Control Area Notification.** At least three months before Initial Synchronization Date, Interconnection Customer shall notify Distribution Provider in writing of the Control Area in which the Generating Facility will be located. If Interconnection Customer elects to locate the Generating Facility in a Control Area other than the Control Area in which the Generating Facility is physically located, and if permitted to do so by the relevant transmission tariffs, all necessary arrangements, including but not limited to those set forth in Article 7 and Article 8 of this GIA, and remote Control Area generator interchange agreements, if applicable, and the appropriate measures under such agreements, shall be executed and implemented prior to the placement of the Generating Facility in the other Control Area.~~

**9.2 [Intentionally Omitted.]**

**9.3 Distribution Provider Obligations.** Distribution Provider shall cause the Distribution System and Distribution Provider's Interconnection Facilities to be operated, maintained and controlled in a safe and reliable manner and in accordance with this GIA. Distribution Provider may provide operating instructions to Interconnection Customer consistent with this GIA and Distribution Provider's operating protocols and procedures as they may change from time to time. Distribution Provider will consider changes to its operating protocols and procedures proposed by Interconnection Customer.

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**9.4 Interconnection Customer Obligations.** Interconnection Customer shall at its own expense operate, maintain and control the Generating Facility and Interconnection

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Customer's Interconnection Facilities in a safe and reliable manner and in accordance with this GIA. Interconnection Customer shall operate the Generating Facility and Interconnection Customer's Interconnection Facilities in accordance with all applicable requirements of the Control Area of which it is part, as such requirements are set forth in Appendix C, Interconnection Details, of this GIA. Appendix C, Interconnection Details, will be modified to reflect changes to the requirements as they may change from time to time. Either Party may request that the other Party provide copies of the requirements set forth in Appendix C, Interconnection Details, of this GIA.

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**9.5 Start-Up and Synchronization.** Consistent with the Parties' mutually acceptable procedures, Interconnection Customer is responsible for the proper synchronization of the Generating Facility to Distribution Provider's Distribution System.

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**9.6 Reactive Power.**

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9.6.1 Power Factor Design Criteria. ~~The~~ Interconnection Customer shall design ~~theits~~ Generating Facility to maintain a composite power delivery at continuous rated power output at the Point of Interconnection ~~at and the Generating Facility shall be capable of operating within~~ a power factor ~~within the~~ range of 0.959 leading to 0.959 lagging, unless ~~the~~ Distribution Provider has established different requirements that apply to all ~~similarly situated~~ generators in the ~~Control Area~~ ~~balancing authority area~~ on a comparable basis. ~~The requirements of~~ ~~Operation outside this paragraph shall not apply to wind generators;~~ ~~rather, range is acceptable provided~~ the requirements of Appendix G shall apply to ~~wind generators.~~

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9.6.2 Voltage Schedules. ~~Once~~ reactive power of the Generating Facility is used to meet the reactive power needs of the Host Loads or that reactive power is otherwise provided under tariff by Distribution Provider. The Interconnection Customer ~~has synchronized~~ shall notify Distribution Provider if it is using the Generating Facility ~~with~~ for power factor correction. Unless otherwise agreed upon by the ~~Distribution System, Distribution Provider shall require~~ Interconnection Customer ~~to operate the Generating Facility to produce or absorb reactive power within the design limitations of the Generating Facility set forth in Article 9.6.1 (Power Factor Design Criteria).~~ and Distribution Provider, Generating Facilities shall automatically regulate power factor, not voltage, while operating in parallel with Distribution Provider's ~~voltage schedules shall treat all sources of reactive power interconnected with the Distribution System in an equitable and not unduly discriminatory manner and consistent with the applicable requirements of the ISO Tariff. Distribution Provider shall exercise Reasonable Efforts to provide Interconnection Customer with such schedules at least one (1) day in advance, and may make changes to such schedules as necessary to maintain the reliability of the Distribution System and Transmission System.~~

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~~Interconnection Customer shall operate the Generating Facility to maintain the specified output voltage or power factor at the Point of Interconnection within the design limitations of the Generating Facility set forth in Article 9.6.1 (Power Factor Design Criteria). If Interconnection Customer is unable to maintain the specified voltage or power factor, it shall promptly notify the Distribution Provider and the ISO.~~ Distribution System.

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~~9.6.2-1 Governors and Regulators. Whenever the Generating Facility is operated in parallel with the Distribution System and the speed governors (if installed on the generating unit pursuant to Good Utility Practice) and voltage regulators are capable of operation, Interconnection Customer shall operate the Generating Facility with its speed governors and voltage regulators in automatic operation. If the Generating Facility's speed governors and voltage regulators are not capable of such automatic operation, Interconnection Customer shall immediately notify Distribution Provider and the ISO, and ensure that the Electric Generating Unit operates as specified in Article 9.6.2 through manual operation and that such Generating Facility's reactive power production or absorption (measured in MVARs) are within the design capability of the Generating Facility's generating unit(s) and steady state stability limits. Interconnection Customer shall not cause its Generating Facility to disconnect automatically or instantaneously from the Distribution System or trip any generating unit comprising the Generating Facility for an under or over frequency condition unless the abnormal frequency condition persists for a time period beyond the limits set forth in ANSI/IEEE Standard C37.106, or such other standard as applied to other generators in the Control Area on a comparable basis.~~ a manner consistent with Rule 21.

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~~9.6.3 Payment for Reactive Power. Payment to Interconnection Customer for reactive power that Interconnection Customer provides or absorbs from the Generating Facility when the ISO requests Interconnection Customer to operate its Generating Facility outside the range specified in Article 9.6.1 will be made by the ISO in accordance with the applicable provisions of the ISO Tariff.~~

**9.7 Outages and Interruptions.**

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**9.7.1 Outages.**

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**9.7.1.1 Outage Authority and Coordination.** Each Party may in accordance with Good Utility Practice in coordination with the other Party remove from service any of its respective Interconnection Facilities, Distribution Upgrades, or Network Upgrades that may impact the other Party's facilities as necessary to perform maintenance or testing or to install or

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replace equipment. Absent an Emergency-~~Condition~~, the Party scheduling a removal of such facility(ies) from service will use Reasonable Efforts to schedule such removal on a date and time mutually acceptable to the Parties. In all circumstances, any Party planning to remove such facility(ies) from service shall use Reasonable Efforts to minimize the effect on the other Party of such removal.

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**9.7.1.2 Outage Schedules.** Interconnection Customer shall submit its planned maintenance schedules for the Generating Facility to Distribution Provider for a minimum of a rolling twenty-four month period. Interconnection Customer shall update its planned maintenance schedules as necessary. Distribution Provider may request Interconnection Customer to reschedule its maintenance as necessary to maintain the reliability of the Distribution System and Transmission System. Distribution Provider shall compensate Interconnection Customer for any additional direct costs that Interconnection Customer incurs as a result of having to reschedule maintenance, including any additional overtime, breaking of maintenance contracts or other costs above and beyond the cost Interconnection Customer would have incurred absent Distribution Provider's request to reschedule maintenance. Interconnection Customer will not be eligible to receive compensation, if during the twelve (12) months prior to the date of the scheduled maintenance, Interconnection Customer had modified its schedule of maintenance activities. Distribution Provider shall have no obligation to pay Interconnection Customer any costs the Interconnection Customer incurs as the result of being directed by the ~~ISOCAISO~~ to reschedule maintenance.

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**9.7.1.3 Outage Restoration.** If an outage on a Party's Interconnection Facilities, Distribution Upgrades, or Network Upgrades adversely affects the other Party's operations or facilities, the Party that owns or controls the facility that is out of service shall use Reasonable Efforts to promptly restore such facility(ies) to a normal operating condition consistent with the nature of the outage. The Party that owns or controls the facility that is out of service shall provide the other Party, to the extent such information is known, information on the nature of the Emergency-~~Condition~~, an estimated time of restoration, and any corrective actions required. Initial verbal notice shall be followed up as soon as practicable with written notice explaining the nature of the outage.

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**9.7.2 Interruption of Service.** If required by Good Utility Practice to do so, Distribution Provider may require Interconnection Customer to interrupt or reduce deliveries of electricity if such delivery of electricity could adversely affect

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Distribution Provider's ability to perform such activities as are necessary to safely and reliably operate and maintain the Distribution System and Transmission System. The following provisions shall apply to any interruption or reduction permitted under this Article 9.7.2:

**9.7.2.1** The interruption or reduction shall continue only for so long as reasonably necessary under Good Utility Practice;

**9.7.2.2** Any such interruption or reduction shall be made on an equitable, non-discriminatory basis with respect to all generating facilities directly connected to the Distribution System;

**9.7.2.3** When the interruption or reduction must be made under circumstances which do not allow for advance notice, Distribution Provider shall notify Interconnection Customer by telephone as soon as practicable of the reasons for the curtailment, interruption, or reduction, and, if known, its expected duration. Telephone notification shall be followed by written notification as soon as practicable;

**9.7.2.4** Except during the existence of an Emergency ~~Condition~~, when the interruption or reduction can be scheduled without advance notice, Distribution Provider shall notify Interconnection Customer in advance regarding the timing of such scheduling and further notify Interconnection Customer of the expected duration. Distribution Provider shall coordinate with Interconnection Customer using Good Utility Practice to schedule the interruption or reduction during periods of least impact to Interconnection Customer and Distribution Provider;

**9.7.2.5** The Parties shall cooperate and coordinate with each other to the extent necessary in order to restore the Generating Facility, Interconnection Facilities, and the Distribution System and Transmission System to their normal operating state, consistent with system conditions and Good Utility Practice.

~~**9.7.3 Under Frequency and Over Frequency Conditions.** The Distribution System is designed to automatically activate a load shed program as required by Applicable Reliability Standards and the Applicable Reliability Council in the event of an under frequency system disturbance. Interconnection Customer shall implement under frequency and over frequency relay set points for the Generating Facility as required by Applicable Reliability Standards and the Applicable Reliability Council to ensure "ride through" capability of the Distribution System. Generating Facility response to frequency deviations of pre-~~

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~~determined magnitudes, both under frequency and over frequency deviations, shall be studied and coordinated with Distribution Provider in accordance with Good Utility Practice. The term "ride through" as used herein shall mean the ability of a Generating Facility to stay connected to and synchronized with the Distribution System during system disturbances within a range of under frequency and over frequency conditions, in accordance with Good Utility Practice.~~

**9.7.3 [Intentionally Omitted.]**

**9.7.4 System Protection and Other Control Requirements.**

**9.7.4.1 System Protection Facilities.** Interconnection Customer shall, at its expense, install, operate and maintain System Protection Facilities as a part of the Generating Facility or Interconnection Customer's Interconnection Facilities. Distribution Provider shall install at Interconnection Customer's expense any System Protection Facilities that may be required on Distribution Provider's Interconnection Facilities, Distribution System, or the Transmission System as a result of the interconnection of the Generating Facility and Interconnection Customer's Interconnection Facilities.

**9.7.4.2** Each Party's protection facilities shall be designed and coordinated with other systems in accordance with Applicable Reliability Standards, Applicable Reliability Council criteria, and Good Utility Practice.

**9.7.4.3** Each Party shall be responsible for protection of its facilities consistent with Good Utility Practice.

**9.7.4.4** Each Party's protective relay design shall incorporate the necessary test switches to perform the tests required in Article 6. The required test switches will be placed such that they allow operation of lockout relays while preventing breaker failure schemes from operating and causing unnecessary breaker operations and/or the tripping of Interconnection Customer's units.

**9.7.4.5** Each Party will test, operate and maintain System Protection Facilities in accordance with Good Utility Practice and, if applicable, the requirements of the Distribution Provider's Interconnection Handbook.

**9.7.4.6** Prior to the In-Service Date, and again prior to the Commercial Operation Date, each Party or its agent shall perform a complete calibration test and functional trip test of the System Protection Facilities. At intervals

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suggested by Good Utility Practice, the standards and procedures of the Distribution Provider, including, if applicable, the requirements of the Distribution Provider's Interconnection Handbook, and following any apparent malfunction of the System Protection Facilities, each Party shall perform both calibration and functional trip tests of its System Protection Facilities. These tests do not require the tripping of any in-service generation unit. These tests do, however, require that all protective relays and lockout contacts be activated.

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**9.7.5 Requirements for Protection.** In compliance with Good Utility Practice and, if applicable, the requirements of the Distribution Provider's Interconnection Handbook, Interconnection Customer shall provide, install, own, and maintain relays, circuit breakers and all other devices necessary to remove any fault contribution of the Generating Facility to any short circuit occurring on the Distribution System not otherwise isolated by Distribution Provider's equipment, such that the removal of the fault contribution shall be coordinated with the protective requirements of the Distribution System. Such protective equipment shall include, without limitation, a disconnecting device or switch with load-interrupting capability located between the Generating Facility and the Distribution System at a site selected upon mutual agreement (not to be unreasonably withheld, conditioned or delayed) of the Parties. Interconnection Customer shall be responsible for protection of the Generating Facility and Interconnection Customer's other equipment from such conditions as negative sequence currents, over- or under-frequency, sudden load rejection, over- or under-voltage, and generator loss-of-field. Interconnection Customer shall be solely responsible to disconnect the Generating Facility and Interconnection Customer's other equipment if conditions on the Distribution System could adversely affect the Generating Facility.

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**9.7.6 Power Quality.** Neither Party's facilities shall cause excessive voltage flicker nor introduce excessive distortion to the sinusoidal voltage or current waves as defined by ANSI Standard C84.1-1989, in accordance with IEEE Standard 519, or any applicable superseding electric industry standard or any alternative Applicable Reliability Standard or Applicable Reliability Council standard. In the event of a conflict among ANSI Standard C84.1-1989, or any applicable superseding electric industry standard, or any alternative Applicable Reliability Standard or Applicable Reliability Council standard, the alternative Applicable Reliability Standard or Applicable Reliability Council standard shall control.

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**9.8 Switching and Tagging Rules.** Each Party shall provide the other Party a copy of its switching and tagging rules that are applicable to the other Party's activities. Such switching and tagging rules shall be developed on a non-discriminatory basis. The

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Parties shall comply with applicable switching and tagging rules, as amended from time to time, in obtaining clearances for work or for switching operations on equipment.

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**9.9 Use of Interconnection Facilities by Third Parties.**

**9.9.1 Purpose of Interconnection Facilities.** Except as may be required by Applicable Laws and Regulations, or as otherwise agreed to among the Parties, the Interconnection Facilities shall be constructed for the sole purpose of interconnecting the Generating Facility to the Distribution System and shall be used for no other purpose.

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**9.9.2 Third Party Users.** If required by Applicable Laws and Regulations or if the Parties mutually agree, such agreement not to be unreasonably withheld, to allow one or more third parties to use Distribution Provider's Interconnection Facilities, or any part thereof, Interconnection Customer will be entitled to compensation for the capital expenses it incurred in connection with the Interconnection Facilities based upon the pro rata use of the Interconnection Facilities by Distribution Provider, all third party users, and Interconnection Customer, in accordance with Applicable Laws and Regulations or upon some other mutually-agreed upon methodology. In addition, cost responsibility for ongoing costs, including operation and maintenance costs associated with the Interconnection Facilities, will be allocated between Interconnection Customer and any third party users based upon the pro rata use of the Interconnection Facilities by Distribution Provider, all third party users, and Interconnection Customer, in accordance with Applicable Laws and Regulations or upon some other mutually agreed upon methodology. If the issue of such compensation or allocation cannot be resolved through such negotiations, it shall be submitted to FERC/CPUC for resolution; if the third party user is seeking a CPUC-jurisdictional use and by FERC if the third party user is seeking a FERC-jurisdictional use. Interconnection Customer agrees to be bound by any such resolution by FERC.

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**9.10 Disturbance Analysis Data Exchange.** The Parties will cooperate with one another in the analysis of disturbances to either the Generating Facility or Distribution Provider's Distribution System and Transmission System by gathering and providing access to any information relating to any disturbance, including information from oscillography, protective relay targets, breaker operations and sequence of events records, and any disturbance information required by Good Utility Practice.

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**Article 10. Maintenance**

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**10.1 Distribution Provider Obligations.** Distribution Provider shall maintain the Distribution System, Transmission System and Distribution Provider's Interconnection Facilities in a safe and reliable manner and in accordance with this GIA.

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**10.2 Interconnection Customer Obligations.** Interconnection Customer shall maintain the Generating Facility and Interconnection Customer's Interconnection Facilities in a safe and reliable manner and in accordance with this GIA.

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**10.3 Coordination.** The Parties shall confer regularly to coordinate the planning, scheduling and performance of preventive and corrective maintenance on the Generating Facility and the Interconnection Facilities.

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**10.4 Secondary Systems.** Each Party shall cooperate with the other in the inspection, maintenance, and testing of control or power circuits that operate below 600 volts, AC or DC, including, but not limited to, any hardware, control or protective devices, cables, conductors, electric raceways, secondary equipment panels, transducers, batteries, chargers, and voltage and current transformers that directly affect the operation of a Party's facilities and equipment which may reasonably be expected to impact the other Party. Each Party shall provide advance notice to the other Party before undertaking any work on such circuits, especially on electrical circuits involving circuit breaker trip and close contacts, current transformers, or potential transformers.

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**10.5 Operating and Maintenance Expenses.** Subject to the provisions herein addressing the use of facilities by others, and except for operations and maintenance expenses associated with modifications made for providing interconnection or transmission service to a third party and such third party pays for such expenses, Interconnection Customer shall be responsible for all reasonable expenses including overheads, associated with: (1) owning, operating, maintaining, repairing, and replacing Interconnection Customer's Interconnection Facilities; and (2) operation, maintenance, repair and replacement of Distribution Provider's Interconnection Facilities.

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**Article 11. Performance ~~Obligation~~ Obligations**

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**11.1 Interconnection Customer Interconnection Facilities.** Interconnection Customer shall design, procure, construct, install, own and/or control Interconnection Customer Interconnection Facilities described in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades, at its sole expense.

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**11.2 Distribution Provider's Interconnection Facilities.** Distribution Provider or Distribution Owner shall design, procure, construct, install, own and/or control the Distribution Provider's Interconnection Facilities described in Appendix A,

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Interconnection Facilities, Network Upgrades and Distribution Upgrades, at the sole expense of the Interconnection Customer.

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**11.3 Network Upgrades and Distribution Upgrades.** Distribution Provider or Distribution Owner shall design, procure, construct, install, and own the ~~Network Upgrades and Distribution Upgrades described in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades. Network Upgrades shall be designed, procured, and constructed in accordance with the CAISO Tariff.~~ The Interconnection Customer shall be responsible for all costs related to Distribution Upgrades. ~~Unless Distribution Provider or Distribution Owner elects to fund the capital for the Distribution Upgrades and Network Upgrades, they shall be funded by Interconnection Customer.~~

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**11.4 Transmission Credits.**

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**11.4.1 Repayment of Amounts Advanced for Network Upgrades.**

11.4.1.1 To the extent that the CAISO Tariff provides for cash repayment to interconnection customers for contribution to the cost of Network Upgrades, Interconnection Customer shall be entitled to a cash repayment, equal to the total amount paid to Distribution Provider and Affected System Operator, if any, for the Network Upgrades, including any tax gross-up or other tax-related payments associated with Network Upgrades, and not refunded to Interconnection Customer pursuant to Article 5.17.8 or otherwise, to be paid to Interconnection Customer on a dollar-for-dollar basis for the non-usage sensitive portion of transmission charges, as payments are made under Distribution Provider's Tariff and Affected System's Tariff for transmission services with respect to the Generating Facility. Any repayment shall include interest calculated in accordance with the methodology set forth in FERC's regulations at 18 C.F.R. §35.19a(a)(2)(iii) from the date of any payment for Network Upgrades through the date on which the Interconnection Customer receives a repayment of such payment pursuant to this subparagraph. Interconnection Customer may assign such repayment rights to any person. To the extent that the CAISO Tariff does not provide for cash repayment to interconnection customers for contribution to the cost of Network Upgrades, Interconnection Customer is not entitled to a cash repayment for amounts paid to the Distribution Provider and Affected System operator for Network Upgrades, and no cash repayment shall be made pursuant to this Agreement.

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~~Notwithstanding the foregoing,~~ **11.4.1.2** If the Interconnection Customer is entitled to a cash repayment pursuant to Article 11.4.1.1, the Interconnection Customer, Distribution Provider, and Affected System Operator may adopt any alternative payment schedule that is mutually agreeable so long as Distribution Provider and Affected System Operator take one of the following actions no later than five years from the Commercial Operation Date: (1) return to Interconnection Customer any amounts advanced for Network Upgrades not previously repaid, or (2) declare in writing that Distribution Provider or Affected System Operator will continue to provide payments to Interconnection Customer on a dollar-for-dollar basis for the non-usage sensitive portion of transmission charges, or develop an alternative schedule that is mutually agreeable and provides for the return of all amounts advanced for Network Upgrades not previously repaid; however, full reimbursement shall not extend beyond twenty (20) years from the Commercial Operation Date.

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**11.4.1.3** If the Generating Facility fails to achieve commercial operation, but it or another Generating Facility is later constructed and makes use of the Network Upgrades, Distribution Provider and Affected System Operator shall at that time reimburse Interconnection Customer for the amounts advanced for the Network Upgrades: if the Interconnection Customer is entitled to a cash repayment pursuant to Article 11.4.1.1. Before any such reimbursement can occur, the Interconnection Customer, or the entity that ultimately constructs the Generating Facility, if different, is responsible for identifying the entity to which reimbursement must be made.

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**11.4.2 Special Provisions for Affected Systems.** Unless Distribution Provider provides, under the GIA, for the repayment of amounts advanced to Affected System Operator for Network Upgrades, Interconnection Customer and Affected System Operator shall enter into an agreement that provides for such repayment. The agreement shall specify the terms governing payments to be made by Interconnection Customer to the Affected System Operator as well as the repayment by the Affected System Operator.

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**11.4.3** Notwithstanding any other provision of this GIA, nothing herein shall be construed as relinquishing or foreclosing any rights, including but not limited to firm transmission rights, capacity rights, transmission congestion rights, or transmission credits, that Interconnection Customer, shall be entitled to, now or in the future under any other agreement or tariff as a result of, or otherwise associated with, the transmission capacity, if any, created by the Network Upgrades, including the right to obtain cash reimbursements or transmission credits for transmission service that is not associated with the Generating Facility.

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**11.5 Provision of Interconnection Financial Security.** The Interconnection Customer is obligated to provide all necessary Interconnection Financial Security required under Section 5.9 of the GIP in a manner acceptable under Section 5.9 of the GIP. Rule 21 Section F.4 if studied under the Independent Study Process. The Interconnection Customer is obligated to provide all necessary Interconnection Financial Security required under Section 4.23 of the GIP if studied under the Transmission Cluster Study Process.

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**Article 12. Invoice**

**12.1 General.** Each Party shall submit to the other Party, on a monthly basis, invoices of amounts due for the preceding month. Each invoice shall state the month to which the invoice applies and fully describe the services and equipment provided. The Parties may discharge mutual debts and payment obligations due and owing to each other on the same date through netting, in which case all amounts a Party owes to the other Party under this GIA, including interest payments or credits, shall be netted so that only the net amount remaining due shall be paid by the owing Party.

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**12.2 Final Invoice.** Within twelve (12) months after completion of the construction of Distribution Provider's Interconnection Facilities, Distribution Upgrades, and the Network Upgrades, Distribution Provider shall provide an invoice of the final cost of the construction of Distribution Provider's Interconnection Facilities, Distribution Upgrades, and the Network Upgrades and shall set forth such costs in sufficient detail to enable Interconnection Customer to compare the actual costs with the estimates and to ascertain deviations, if any, from the cost estimates. Distribution Provider shall refund to Interconnection Customer any amount by which the actual payment by Interconnection Customer for estimated costs exceeds the actual costs of construction within thirty (30) Calendar Days of the issuance of such final construction invoice.

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**12.3 Payment.** Invoices shall be rendered to the paying Party at the address specified in Appendix F. The Party receiving the invoice shall pay the invoice within thirty (30) Calendar Days of receipt. All payments shall be made in immediately available funds payable to the other Party, or by wire transfer to a bank named and account designated by the invoicing Party. Payment of invoices by either Party will not constitute a waiver of any rights or claims either Party may have under this GIA.

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**12.4 Disputes.** In the event of a billing dispute between Distribution Provider and Interconnection Customer, Distribution Provider shall continue to provide Interconnection Service under this GIA as long as Interconnection Customer: (i) continues to make all payments not in dispute; and (ii) pays to Distribution Provider or into an independent escrow account the portion of the invoice in dispute, pending

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resolution of such dispute. If Interconnection Customer fails to meet these two requirements for continuation of service, then Distribution Provider may provide notice to Interconnection Customer of a Default pursuant to Article 17. Within thirty (30) Calendar Days after the resolution of the dispute, the Party that owes money to the other Party shall pay the amount due with interest calculated in accord with using an interest rate equal to one-twelfth of the methodology set forth in FERC's regulations at 18 CFR § 35.19a(a)(2)(iii) Federal Reserve three-month Commercial paper Rate – Non-Financial, from the Federal Reserve Statistical Release H.15 (expressed as an annual rate).

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**Article 13. Emergencies Consistent with Rule 21**

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**13.1 — Definition.** "Emergency Condition" shall mean a condition or situation: (i) that in the judgment of the Party making the claim is imminently likely to endanger life or property; or (ii) that, in the case of Distribution Provider, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to the Distribution System, Distribution Provider's Interconnection Facilities or the Transmission Systems of others to which the Distribution System is directly connected; or (iii) that, in the case of Interconnection Customer, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Generating Facility or Interconnection Customer's Interconnection Facilities' System restoration and black start shall be considered Emergency Conditions; provided, that Interconnection Customer is not obligated by this GIA to possess black start capability.

**13.2 — Obligations.** Each Party shall comply with the Emergency Condition procedures of the ISO, NERC, the Applicable Reliability Council, Applicable Reliability Standards, Applicable Laws and Regulations, and any emergency procedures set forth in this GIA.

**13.3 — Notice.** Distribution Provider shall notify Interconnection Customer promptly when it becomes aware of an Emergency Condition that affects Distribution Provider's Interconnection Facilities, Distribution System or the Transmission System that may reasonably be expected to affect Interconnection Customer's operation of the Generating Facility or Interconnection Customer's Interconnection Facilities. Interconnection Customer shall notify Distribution Provider promptly when it becomes aware of an Emergency Condition that affects the Generating Facility or Interconnection Customer's Interconnection Facilities that may reasonably be expected to affect the Distribution System, Transmission System or Distribution Provider's Interconnection Facilities. To the extent information is known, the notification shall describe the Emergency Condition, the extent of the damage or deficiency, the expected effect on the operation of Interconnection Customer's or Distribution Provider's facilities and operations, its

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~~anticipated duration and the corrective action taken and/or to be taken. The initial notice shall be followed as soon as practicable with written notice.~~

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**13.4 Immediate Action.** ~~Unless, in Interconnection Customer's reasonable judgment, immediate action is required, Interconnection Customer shall obtain the consent of Distribution Provider, such consent to not be unreasonably withheld, prior to performing any manual switching operations at the Generating Facility or Interconnection Customer's Interconnection Facilities in response to an Emergency Condition either declared by Distribution Provider or otherwise regarding the Distribution System.~~

**13.5 Distribution Provider Authority.**

**13.5.1 General.** ~~Distribution Provider may take whatever actions or inactions with regard to the Distribution System and Transmission System or Distribution Provider's Interconnection Facilities it deems necessary during an Emergency Condition in order to (i) preserve public health and safety, (ii) preserve the reliability of the Distribution System and Transmission System or Distribution Provider's Interconnection Facilities, (iii) limit or prevent damage, and (iv) expedite restoration of service.~~

~~Distribution Provider shall use Reasonable Efforts to minimize the effect of such actions or inactions on the Generating Facility or Interconnection Customer's Interconnection Facilities. Distribution Provider may, on the basis of technical considerations, require the Generating Facility to mitigate an Emergency Condition by taking actions necessary and limited in scope to remedy the Emergency Condition, including, but not limited to, directing Interconnection Customer to shut down, start up, increase or decrease the real or reactive power output of the Generating Facility; implementing a reduction or disconnection pursuant to Article 13.5.2; directing Interconnection Customer to assist with blackstart (if available) or restoration efforts; or altering the outage schedules of the Generating Facility and Interconnection Customer's Interconnection Facilities. Interconnection Customer shall comply with all of Distribution Provider's operating instructions concerning Generating Facility real power and reactive power output within the manufacturer's design limitations of the Generating Facility's equipment that is in service and physically available for operation at the time, in compliance with Applicable Laws and Regulations.~~

**13.5.2 Reduction and Disconnection.** ~~Distribution Provider may reduce Interconnection Service or disconnect the Generating Facility or Interconnection Customer's Interconnection Facilities, when such, reduction or disconnection is necessary under Good Utility Practice due to Emergency Conditions. These rights are separate and distinct from any right of curtailment of the ISO pursuant~~



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to the ISO Tariff. When Distribution Provider can schedule the reduction or disconnection in advance, Distribution Provider shall notify Interconnection Customer of the reasons, timing and expected duration of the reduction or disconnection. Distribution Provider shall coordinate with Interconnection Customer using Good Utility Practice to schedule the reduction or disconnection during periods of least impact to Interconnection Customer and Distribution Provider. Any reduction or disconnection shall continue only for so long as reasonably necessary under Good Utility Practice. The Parties shall cooperate with each other to restore the Generating Facility, the Interconnection Facilities, and the Distribution System to their normal operating state as soon as practicable consistent with Good Utility Practice.

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**13.6 — Interconnection Customer Authority.** Consistent with Good Utility Practice and the GIA and the GIP, Interconnection Customer may take actions or inactions with regard to the Generating Facility or Interconnection Customer's Interconnection Facilities during an Emergency Condition in order to (i) preserve public health and safety, (ii) preserve the reliability of the Generating Facility or Interconnection Customer's Interconnection Facilities, (iii) limit or prevent damage, and (iv) expedite restoration of service. Interconnection Customer shall use Reasonable Efforts to minimize the effect of such actions or inactions on the Distribution System and Distribution Provider's Interconnection Facilities. Distribution Provider shall use Reasonable Efforts to assist Interconnection Customer in such actions.

**13.7 — Limited Liability.** Except as otherwise provided in Article 11.6.1 of this GIA, neither Party shall be liable to the other for any action it takes in responding to an Emergency Condition so long as such action is made in good faith and is consistent with Good Utility Practice.

**13.1 Emergencies.** Emergencies shall be handled in a manner consistent with Rule 21.

**Article 14. Regulatory Requirements and Governing Law**

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**14.1 Regulatory Requirements.** Each Party's obligations under this GIA shall be subject to its receipt of any required approval or certificate from one or more Governmental Authorities in the form and substance satisfactory to the applying Party, or the Party making any required filings with, or providing notice to, such Governmental Authorities, and the expiration of any time period associated therewith. Each Party shall in good faith seek and use its Reasonable Efforts to obtain such other approvals. Nothing in this GIA shall require Interconnection Customer to take any action that could result in its inability to obtain, or its loss of, status or exemption under the Federal Power Act, the Public Utility Holding Company Act of 1935, as amended, or the Public Utility Regulatory Policies Act of 1978.

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**14.2 Governing Law.**

**14.2.1** The validity, interpretation and performance of this GIA and each of its provisions shall be governed by the laws of the state ~~where the Point of Interconnection is located~~ of California, without regard to its conflicts of law principles.

**14.2.2** This GIA is subject to all Applicable Laws and Regulations.

**14.2.3** Each Party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, rules, or regulations of a Governmental Authority.

**Article 15. Notices.**

**15.1 General.** Unless otherwise provided in this GIA, any notice, demand or request required or permitted to be given by either Party to the other and any instrument required or permitted to be tendered or delivered by either Party in writing to the other shall be effective when delivered and may be so given, tendered or delivered, by recognized national courier, or by depositing the same with the United States Postal Service with postage prepaid, for delivery by certified or registered mail, addressed to the Party, or personally delivered to the Party, at the address set out in Appendix F, Addresses for Delivery of Notices and Billings.

Either Party may change the notice information in this GIA by giving five (5) Business Days written notice prior to the effective date of the change.

**15.2 Billings and Payments.** Billings and payments shall be sent to the addresses set out in Appendix F.

**15.3 Alternative Forms of Notice.** Any notice or request required or permitted to be given by a Party to the other and not required by this Agreement to be given in writing may be so given by telephone, facsimile or email to the telephone numbers and email addresses set out in Appendix F.

**15.4 Operations and Maintenance Notice.** Each Party shall notify the other Party in writing of the identity of the person(s) that it designates as the point(s) of contact with respect to the implementation of Articles 9 and 10.

**Article 16. Uncontrollable Force**

**16.1 Uncontrollable Force.**

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**16.1.1** Economic hardship is not considered an Uncontrollable Force event.

**16.1.2** Neither Party shall be considered to be in Default with respect to any obligation hereunder, (including obligations under Article 4), other than the obligation to pay money when due, if prevented from fulfilling such obligation by Uncontrollable Force. A Party unable to fulfill any obligation hereunder (other than an obligation to pay money when due) by reason of an Uncontrollable Force shall give notice and the full particulars of such Uncontrollable Force to the other Party in writing or by telephone as soon as reasonably possible after the occurrence of the cause relied upon. Telephone notices given pursuant to this article shall be confirmed in writing as soon as reasonably possible and shall specifically state full particulars of the Uncontrollable Force, the time and date when the Uncontrollable Force occurred and when the Uncontrollable Force is reasonably expected to cease. The Party affected shall exercise due diligence to remove such disability with reasonable dispatch, but shall not be required to accede or agree to any provision not satisfactory to it in order to settle and terminate a strike or other labor disturbance.

**Article 17. Default**

**17.1 Default**

**17.1.1 General.** No Default shall exist where such failure to discharge an obligation (other than the payment of money) is the result of an Uncontrollable Force as defined in this GIA or the result of an act of omission of the other Party. Upon a Breach, the non-breaching Party shall give written notice of such Breach to the breaching Party. Except as provided in Article 17.1.2, the breaching Party shall have thirty (30) Calendar Days from receipt of the Default notice within which to cure such Breach; provided however, if such Breach is not capable of cure within thirty (30) Calendar Days, the breaching Party shall commence such cure within thirty (30) Calendar Days after notice and continuously and diligently complete such cure within ninety (90) Calendar Days from receipt of the Default notice; and, if cured within such time, the Breach specified in such notice shall cease to exist.

**17.1.2 Right to Terminate.** If a Breach is not cured as provided in this article, or if a Breach is not capable of being cured within the period provided for herein, the non-breaching Party shall have the right to declare a Default and terminate this GIA by written notice at any time until cure occurs, and be relieved of any further obligation hereunder and, whether or not that Party terminates this GIA, to recover from the breaching Party all amounts due hereunder, plus all other

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damages and remedies to which it is entitled at law or in equity. The provisions of this article will survive termination of this GIA.

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**Article 18. Indemnity, Consequential Damages and Insurance**

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**18.1 Indemnity.** The Parties shall at all times indemnify, defend, and hold the other Party harmless from, any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the other Party's action or inactions of its obligations under this GIA on behalf of the Indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the Indemnified Party.

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**18.1.1 Indemnified Person.** If an Indemnified Person is entitled to indemnification under this Article 18 as a result of a claim by a third party, and the Indemnifying Party fails, after notice and reasonable opportunity to proceed under Article 18.1, to assume the defense of such claim, such Indemnified Person may at the expense of the Indemnifying Party contest, settle or consent to the entry of any judgment with respect to, or pay in full, such claim.

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**18.1.2 Indemnifying Party.** If an Indemnifying Party is obligated to indemnify and hold any Indemnified Person harmless under this Article 18, the amount owing to the Indemnified Person shall be the amount of such Indemnified Person's actual Loss, net of any insurance or other recovery.

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**18.1.3 Indemnity Procedures.** Promptly after receipt by an Indemnified Person of any claim or notice of the commencement of any action or administrative or legal proceeding or investigation as to which the indemnity provided for in Article 18.1 may apply, the Indemnified Person shall notify the Indemnifying Party of such fact. Any failure of or delay in such notification shall not affect a Party's indemnification obligation unless such failure or delay is materially prejudicial to the Indemnifying Party.

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The Indemnifying Party shall have the right to assume the defense thereof with counsel designated by such Indemnifying Party and reasonably satisfactory to the Indemnified Person. If the defendants in any such action include one or more Indemnified Persons and the Indemnifying Party and if the Indemnified Person reasonably concludes that there may be legal defenses available to it and/or other Indemnified Persons which are different from or additional to those available to the Indemnifying Party, the Indemnified Person shall have the right to select separate counsel to assert such legal defenses and to otherwise participate in the defense of such action on its own behalf. In such instances, the Indemnifying

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Party shall only be required to pay the fees and expenses of one additional attorney to represent an Indemnified Person or Indemnified Persons having such differing or additional legal defenses.

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The Indemnified Person shall be entitled, at its expense, to participate in any such action, suit or proceeding, the defense of which has been assumed by the Indemnifying Party. Notwithstanding the foregoing, the Indemnifying Party (i) shall not be entitled to assume and control the defense of any such action, suit or proceedings if and to the extent that, in the opinion of the Indemnified Person and its counsel, such action, suit or proceeding involves the potential imposition of criminal liability on the Indemnified Person, or there exists a conflict or adversity of interest between the Indemnified Person and the Indemnifying Party, in such event the Indemnifying Party shall pay the reasonable expenses of the Indemnified Person, and (ii) shall not settle or consent to the entry of any judgment in any action, suit or proceeding without the consent of the Indemnified Person, which shall not be reasonably withheld, conditioned or delayed.

- 18.2 Consequential Damages.** ~~Other than the Liquidated Damages heretofore described,~~ ~~in~~ no event shall either Party be liable under any provision of this GIA for any losses, damages, costs or expenses for any special, indirect, incidental, consequential, or punitive damages, including but not limited to loss of profit or revenue, loss of the use of equipment, cost of capital, cost of temporary equipment or services, whether based in whole or in part in contract, in tort, including negligence, strict liability, or any other theory of liability; provided, however, that damages for which a Party may be liable to the other Party under another agreement will not be considered to be special, indirect, incidental, or consequential damages hereunder.

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- 18.3 Insurance.** Each party shall, at its own expense, maintain in force throughout the period of this GIA, and until released by the other Party, the following minimum insurance coverages, with insurers authorized to do business in the state where the Point of Interconnection is located:

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- 18.3.1** ~~Employers'~~ Employers' Liability and Workers' Compensation Insurance providing statutory benefits in accordance with the laws and regulations of the state in which the Point of Interconnection is located.

- 18.3.2** Commercial General Liability Insurance including premises and operations, personal injury, broad form property damage, broad form blanket contractual liability coverage (including coverage for the contractual indemnification) products and completed operations coverage, coverage for explosion, collapse and underground hazards, independent contractors coverage, coverage for pollution to the extent normally available and punitive damages to the extent normally

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available and a cross liability endorsement, with minimum limits of One Million Dollars (\$1,000,000) per occurrence/One Million Dollars (\$1,000,000) aggregate combined single limit for personal injury, bodily injury, including death and property damage.

- 18.3.3** Comprehensive Automobile Liability Insurance for coverage of owned and non-owned and hired vehicles, trailers or semi-trailers designed for travel on public roads, with a minimum, combined single limit of One Million Dollars (\$1,000,000) per occurrence for bodily injury, including death, and property damage.
- 18.3.4** Excess Public Liability Insurance over and above the Employers' Liability Commercial General Liability and Comprehensive Automobile Liability Insurance coverage, with a minimum combined single limit of Twenty Million Dollars (\$20,000,000) per occurrence/Twenty Million Dollars (\$20,000,000) aggregate.
- 18.3.5** The Commercial General Liability Insurance, Comprehensive Automobile Insurance and Excess Public Liability Insurance policies shall name the other Party, its parent, associated and Affiliate companies and their respective directors, officers, agents, servants and employees ("Other Party Group") as additional insured. All policies shall contain provisions whereby the insurers waive all rights of subrogation in accordance with the provisions of this GIA against the Other Party Group and provide thirty (30) Calendar Days advance written notice to the Other Party Group prior to anniversary date of cancellation or any material change in coverage or condition.
- 18.3.6** The Commercial General Liability Insurance, Comprehensive Automobile Liability Insurance and Excess Public Liability Insurance policies shall contain provisions that specify that the policies are primary and shall apply to such extent without consideration for other policies separately carried and shall state that each insured is provided coverage as though a separate policy had been issued to each, except the insurer's liability shall not be increased beyond the amount for which the insurer would have been liable had only one insured been covered. Each Party shall be responsible for its respective deductibles or retentions.
- 18.3.7** The Commercial General Liability Insurance, Comprehensive Automobile Liability Insurance and Excess Public Liability Insurance policies, if written on a Claims First Made Basis, shall be maintained in full force and effect for two (2) years after termination of this GIA, which coverage may be in the form of tail coverage or extended reporting period coverage if agreed by the Parties.

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**18.3.8** The requirements contained herein as to the types and limits of all insurance to be maintained by the Parties are not intended to and shall not in any manner, limit or qualify the liabilities and obligations assumed by the Parties under this GIA.

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**18.3.9** Within ten (10) days following execution of this GIA, and as soon as practicable after the end of each fiscal year or at the renewal of the insurance policy and in any event within ninety (90) days thereafter, each Party shall provide certification of all insurance required in this GIA, executed by each insurer or by an authorized representative of each insurer.

**18.3.10** Notwithstanding the foregoing, each Party may self-insure to meet the minimum insurance requirements of Articles 18.3.2 through 18.3.8 to the extent it maintains a self-insurance program; provided that, such Party's senior secured debt is rated at investment grade or better by Standard & Poor's and that its self-insurance program meets the minimum insurance requirements of Articles 18.3.2 through 18.3.8. For any period of time that a Party's senior secured debt is unrated by Standard & Poor's or is rated at less than investment grade by Standard & Poor's, such Party shall comply with the insurance requirements applicable to it under Articles 18.3.2 through 18.3.9. In the event that a Party is permitted to self-insure pursuant to this article, it shall notify the other Party that it meets the requirements to self-insure and that its self-insurance program meets the minimum insurance requirements in a manner consistent with that specified in Article 18.3.9.

**18.3.11** The Parties agree to report to each other in writing as soon as practical all accidents or occurrences resulting in injuries to any person, including death, and any property damage arising out of this GIA.

**Article 19. Assignment**

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**19.1 Assignment.** This GIA may be assigned by either Party only with the written consent of the other; provided that either Party may assign this GIA without the consent of the other Party to any Affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this GIA; and provided further that Interconnection Customer shall have the right to assign this GIA, without the consent of Distribution Provider, for collateral security purposes to aid in providing financing for the Generating Facility, provided that Interconnection Customer will promptly notify Distribution Provider of any such assignment. Any financing arrangement entered into by Interconnection Customer pursuant to this article will provide that prior to or upon the exercise of the secured party's, trustee's or mortgagee's assignment rights pursuant to said arrangement, the secured creditor, the trustee or mortgagee will notify Distribution Provider of the date and particulars of any such exercise of assignment right(s), including providing the

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Distribution Provider with proof that it meets the requirements of Articles 11.5 and 18.3. Any attempted assignment that violates this article is void and ineffective. Any assignment under this GIA shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

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**Article 20. Severability**

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**20.1 Severability.** If any provision in this GIA is finally determined to be invalid, void or unenforceable by any court or other Governmental Authority having jurisdiction, such determination shall not invalidate, void or make unenforceable any other provision, agreement or covenant of this GIA; provided that if Interconnection Customer (or any third party, but only if such third party is not acting at the direction of Distribution Provider) seeks and obtains such a final determination with respect to any provision of the Alternate Option to Build (Article 5.1.2), or the Negotiated Option (Article 5.1.43), then none of these provisions shall thereafter have any force or effect and the Parties' rights and obligations shall be governed solely by the Standard Option (Article 5.1.1).

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**Article 21. Comparability**

**21.1 Comparability.** The Parties will comply with all applicable comparability and code of conduct laws, rules and regulations, as amended from time to time.

**Article 22. Confidentiality**

**22.1 Confidentiality.** ~~Definition of Confidential Information shall include, without limitation, all information relating to a Party's technology, research and development, business affairs, and pricing, and any information supplied by either of the Parties to the other prior to the execution of this GIA.~~

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~~Information is Confidential Information only if it is clearly designated or marked Agreement are set forth in writing as confidential on the face of the document, or, if the information is conveyed orally or by inspection, if the Party providing the information orally informs the Party receiving the information that the information is confidential.~~

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~~If requested by either Party, the other Party shall provide Rule 21, Section D.7 (Confidentiality) and in writing, the basis for asserting that the information referred to the following provisions included in this Article 22 warrants confidential treatment, and the requesting Party may disclose such writing to the appropriate Governmental Authority. Each Party shall be responsible for the costs associated with affording confidential treatment to its information.~~

~~22.1.1 Term.~~ During the term of this GIA, and for a period of three (3) years after the expiration or termination of this GIA, except as otherwise provided in this Article 22, each Party shall hold in confidence and shall not disclose to any person Confidential Information.

~~22.1.2 Scope.~~ Confidential Information shall not include information that the receiving Party can demonstrate: (1) is generally available to the public other than as a result of a disclosure by the receiving Party; (2) was in the lawful possession of the receiving Party on a non-confidential basis before receiving it from the disclosing Party; (3) was supplied to the receiving Party without restriction by a third party, who, to the knowledge of the receiving Party after due inquiry, was under no obligation to the disclosing Party to keep such information confidential; (4) was independently developed by the receiving Party without reference to Confidential Information of the disclosing Party; (5) is, or becomes, publicly known, through no wrongful act or omission of the receiving Party or Breach of this GIA; or (6) is required, in accordance with Article 22.1.7 of the GIA, Order of Disclosure, to be disclosed by any Governmental Authority or is otherwise required to be disclosed by law or subpoena, or is necessary in any legal proceeding establishing rights and obligations under this GIA. Information designated as Confidential Information will no longer be deemed confidential if the Party that designated the information as confidential notifies the other Party that it no longer is confidential.

~~22.1.3 Release of Confidential Information.~~ Neither Party shall release or disclose Confidential Information to any other person, ~~except to its Affiliates (limited by the Standards of Conduct requirements), subcontractors, employees, consultants,~~ or to parties who may be or considering providing financing to or equity participation with Interconnection Customer, or to potential purchasers or assignees of Interconnection Customer, on a need-to-know basis in connection with ~~this GIA~~ these procedures, unless such person has first been advised of the confidentiality provisions of this Article 22 and has agreed to comply with such provisions. Notwithstanding the foregoing, a Party providing Confidential Information to any person shall remain primarily responsible for any release of Confidential Information in contravention of this Article 22.

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**22.1.4-2 Rights.** Each Party retains all rights, title, and interest in the Confidential Information that each Party discloses to the other Party. The disclosure by each Party to the other Party of Confidential Information shall not be deemed a waiver by either Party or any other person or entity of the right to protect the Confidential Information from public disclosure.

**22.1.53 No Warranties.** By providing Confidential Information, neither Party makes any warranties or representations as to its accuracy or completeness. In addition, by supplying Confidential Information, neither Party obligates itself to provide any particular information or Confidential Information to the other Party nor to enter into any further agreements or proceed with any other relationship or joint venture.

**22.1.64 Standard of Care.** Each Party shall use at least the same standard of care to protect Confidential Information it receives as it uses to protect its own Confidential Information from unauthorized disclosure, publication or dissemination; however, in no case shall a Party use less than reasonable care in protecting Confidential Information. Each Party may use Confidential Information solely to fulfill its obligations to the other Party under this GIA Agreement or its regulatory requirements.

**22.1.75 Order of Disclosure.** If a court or a Government Authority or entity with the right, power, and apparent authority to do so requests or requires either Party, by subpoena, oral deposition, interrogatories, requests for production of documents, administrative order, or otherwise, to disclose Confidential Information, that Party shall provide the other Party with prompt notice of such request(s) or requirement(s) so that the other Party may seek an appropriate protective order or waive compliance with the terms of this GIA. Notwithstanding the absence of a protective order or waiver, the Party may disclose such Confidential Information which, in the opinion of its counsel, the Party is legally compelled to disclose. Each Party will use Reasonable Efforts to obtain reliable assurance that confidential treatment will be accorded any Confidential Information so furnished.

**22.1.8 Termination of Agreement.** Upon termination of this GIA for any reason, each Party shall, within ten (10) Calendar Days of receipt of a written request from the other Party, use Reasonable Efforts to destroy, erase, or delete (with such destruction, erasure, and deletion certified in writing to the other Party) or return to the other Party, without retaining copies thereof, any and all written or electronic Confidential Information received from the other Party.

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**22.1.922.1.6 Remedies.** The Parties agree that monetary damages would be inadequate to compensate a Party for the other Party's Breach of its obligations under this Article-22. Each Party accordingly agrees that the other Party shall be entitled to equitable relief, by way of injunction or otherwise, if the first Party Breaches or threatens to Breach its obligations under this Article-22, which equitable relief shall be granted without bond or proof of damages, and the receiving Party shall not plead in defense that there would be an adequate remedy at law. Such remedy shall not be deemed an exclusive remedy for the Breach of this Article-22, but shall be in addition to all other remedies available at law or in equity. The Parties further acknowledge and agree that the covenants contained herein are necessary for the protection of legitimate business interests and are reasonable in scope. No Party, however, shall be liable for indirect, incidental, or consequential or punitive damages of any nature or kind resulting from or arising in connection with this Article-22.

**22.1.10 Disclosure to FERC, its Staff, or a State.** Notwithstanding anything in this Article 22 to the contrary, and pursuant to 18 CFR section 1b.20, if FERC or its staff, during the course of an investigation or otherwise, requests information from one of the Parties that is otherwise required to be maintained in confidence pursuant to this GIA, the Party shall provide the requested information to FERC or its staff, within the time provided for in the request for information. In providing the information to FERC or its staff, the Party must, consistent with 18 CFR section 388.112, request that the information be treated as confidential and non-public by FERC and its staff and that the information be withheld from public disclosure. Parties are prohibited from notifying the other Party to this GIA prior to the release of the Confidential Information to FERC or its staff. The Party shall notify the other Party to the GIA when it is notified by FERC or its staff that a request to release Confidential Information has been received by FERC, at which time either of the Parties may respond before such information would be made public, pursuant to 18 CFR section 388.112. Requests from a state regulatory body conducting a confidential investigation shall be treated in a similar manner if consistent with the applicable state rules and regulations.

**22.1.11** Subject to the exception in Article 22.1.10, any information that a Party claims is competitively sensitive, commercial or financial information under this GIA ("Confidential Information") shall not be disclosed by the other Party to any person not employed or retained by the other Party, except to the extent disclosure is (i) required by law; (ii) reasonably deemed by the disclosing Party to be required to be disclosed in connection with a dispute between or among the Parties, or the defense of litigation or dispute; (iii) otherwise permitted by consent of the other Party, such consent not to be unreasonably withheld; or (iv) necessary to fulfill its obligations under this GIA or as a transmission service provider or a

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~~Control Area operator including disclosing the Confidential Information to an RTO or ISO or to a regional or national reliability organization. The Party asserting confidentiality shall notify the other Party in writing of the information it claims is confidential. Prior to any disclosures of the other Party's Confidential Information under this subparagraph, or if any third party or Governmental Authority makes any request or demand for any of the information described in this subparagraph, the disclosing Party agrees to promptly notify the other Party in writing and agrees to assert confidentiality and cooperate with the other Party in seeking to protect the Confidential Information from public disclosure by confidentiality agreement, protective order or other reasonable measures.~~

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**Article 23. Environmental Releases**

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- 23.1** Each Party shall notify the other Party, first orally and then in writing, of the release of any Hazardous Substances, any asbestos or lead abatement activities, or any type of remediation activities related to the Generating Facility or the Interconnection Facilities, each of which may reasonably be expected to affect the other Party. The notifying Party shall: (i) provide the notice as soon as practicable, provided such Party makes a good faith effort to provide the notice no later than twenty-four hours after such Party becomes aware of the occurrence; and (ii) promptly furnish to the other Party copies of any publicly available reports filed with any Governmental Authorities addressing such events.

**Article 24. Information Requirements**

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- 24.1 Information Acquisition.** Distribution Provider and Interconnection Customer shall submit specific information regarding the electrical characteristics of their respective facilities to each other as described below and in accordance with Applicable Reliability Standards.

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- 24.2 Information Submission by Distribution Provider.** The initial information submission by Distribution Provider shall occur no later than one hundred eighty (180) Calendar Days prior to Trial Operation and shall include Distribution System and Transmission System information necessary to allow Interconnection Customer to select equipment and meet any system protection and stability requirements, unless otherwise agreed to by the Parties. On a monthly basis Distribution Provider shall provide Interconnection Customer a status report on the construction and installation of Distribution Provider's Interconnection Facilities, Distribution Upgrades, and Network Upgrades, including, but not limited to, the following information: (1) progress to date; (2) a description of the activities since the last report; (3) a description of the action items for the next period; and (4) the delivery status of equipment ordered.

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- 24.3 Updated Information Submission by Interconnection Customer.** The updated information submission by Interconnection Customer, including manufacturer information, shall occur no later than one hundred eighty (180) Calendar Days prior to the Trial Operation. If studied under the Transmission Cluster Study Process, Interconnection Customer shall submit a completed copy of the Generating Facility data requirements contained in Appendix 1 to the GIP. If studied under the Independent Study Process, Interconnection Customer shall submit a completed copy of the Generating Facility data requirements contained in the Rule 21 Interconnection Request for Exporting Generating Facilities. It shall also include any additional information provided to Distribution Provider for the Feasibility and Facilities Study. Information in this submission shall be the most current Generating Facility design or expected performance data. Information submitted for stability models shall be compatible with Distribution Provider standard models. If there is no compatible model, Interconnection Customer will work with a consultant mutually agreed to by the Parties to develop and supply a standard model and associated information.

If Interconnection Customer's data is materially different from what was originally provided to Distribution Provider pursuant to the Interconnection Study Agreement between Distribution Provider and Interconnection Customer, then Distribution Provider will conduct appropriate studies to determine the impact on Distribution Provider Distribution System and Transmission System based on the actual data submitted pursuant to this Article 24.3. The Interconnection Customer shall not begin Trial Operation until such studies are completed.

- 24.4 Information Supplementation.** Prior to the Trial Operation Date, the Parties shall supplement their information submissions described above in this Article 24 with any and all "as-built" Generating Facility information or "as-tested" performance information that differs from the initial submissions or, alternatively, written confirmation that no such differences exist. The Interconnection Customer shall conduct tests on the Generating Facility as required by Good Utility Practice such as an open circuit "step voltage" test on the Generating Facility to verify proper operation of the Generating Facility's automatic voltage regulator.

Unless otherwise agreed, the test conditions shall include: (1) Generating Facility at synchronous speed; (2) automatic voltage regulator on and in voltage control mode; and (3) a five percent change in Generating Facility terminal voltage initiated by a change in the voltage regulators reference voltage. Interconnection Customer shall provide validated test recordings showing the responses of Generating Facility terminal and field voltages. In the event that direct recordings of these voltages is impractical, recordings of other voltages or currents that mirror the response of the Generating Facility's terminal or field voltage are acceptable if information necessary to translate these alternate quantities

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to actual Generating Facility terminal or field voltages is provided. Generating Facility testing shall be conducted and results provided to Distribution Provider for each individual generating unit in a station.

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Subsequent to the Commercial Operation Date, Interconnection Customer shall provide Distribution Provider any information changes due to equipment replacement, repair, or adjustment. Distribution Provider shall provide Interconnection Customer any information changes due to equipment replacement, repair or adjustment in the directly connected substation or any adjacent Distribution Provider-owned substation that may affect Interconnection Customer's Interconnection Facilities equipment ratings, protection or operating requirements. The Parties shall provide such information no later than thirty (30) Calendar Days after the date of the equipment replacement, repair or adjustment.

**Article 25. Information Access and Audit Rights**

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- 25.1 Information Access. Each Party (the "disclosing Party") shall make available to the other Party information that is in the possession of the disclosing Party and is necessary in order for the other Party to:
- (i) verify the costs incurred by the disclosing Party for which the other Party is responsible under this GIA; and
  - (ii) carry out its obligations and responsibilities under this GIA. The Parties shall not use such information for purposes other than those set forth in this Article 25.1 and to enforce their rights under this GIA.

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- 25.2 **Reporting of Non-Uncontrollable Force Events.** Each Party (the "notifying Party") shall notify the other Party when the notifying Party becomes aware of its inability to comply with the provisions of this GIA for a reason other than an Uncontrollable Force event. The Parties agree to cooperate with each other and provide necessary information regarding such inability to comply, including the date, duration, reason for the inability to comply, and corrective actions taken or planned to be taken with respect to such inability to comply. Notwithstanding the foregoing, notification, cooperation or information provided under this article shall not entitle the Party receiving such notification to allege a cause for anticipatory breach of this GIA.

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- 25.3 **Audit Rights.** Subject to the requirements of confidentiality under Article 22 of this GIA, each Party shall have the right, during normal business hours, and upon prior reasonable notice to the other Party, to audit at its own expense the other Party's accounts and records pertaining to either Party's performance or either Party's satisfaction of obligations under this GIA. Such audit rights shall include audits of the other Party's costs, calculation of invoiced amounts, Distribution Provider's efforts to allocate responsibility for interruption or reduction of generation on the Distribution System, and each Party's actions in an Emergency-Condition. Any audit authorized by this article shall be performed at the offices where such accounts and records are maintained and

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shall be limited to those portions of such accounts and records that relate to each Party's performance and satisfaction of obligations under this GIA. Each Party shall keep such accounts and records for a period equivalent to the audit rights periods described in Article 25.4.

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**25.4 Audit Rights Periods.**

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**25.4.1 Audit Rights Period for Construction-Related Accounts and Records.**

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Accounts and records related to the design, engineering, procurement, and construction of Distribution Provider's Interconnection Facilities, Distribution Upgrades, and Network Upgrades shall be subject to audit for a period of twenty-four months following Distribution Provider's issuance of a final invoice in accordance with Article 12.2.

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**25.4.2 Audit Rights Period for All Other Accounts and Records.**

Accounts and records related to either Party's performance or satisfaction of all obligations under this GIA other than those described in Article 25.4.1 shall be subject to audit as follows: (i) for an audit relating to cost obligations, the applicable audit rights period shall be twenty-four months after the auditing Party's receipt of an invoice giving rise to such cost obligations; and (ii) for an audit relating to all other obligations, the applicable audit rights period shall be twenty-four months after the event for which the audit is sought.

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**25.5 Audit Results.** If an audit by a Party determines that an overpayment or an underpayment has occurred, a notice of such overpayment or underpayment shall be given to the other Party together with those records from the audit which support such determination.

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**Article 26. Subcontractors**

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**26.1 General.** Nothing in this GIA shall prevent a Party from utilizing the services of any subcontractor as it deems appropriate to perform its obligations under this GIA; provided, however, that each Party shall require its subcontractors to comply with all applicable terms and conditions of this GIA in providing such services and each Party shall remain primarily liable to the other Party for the performance of such subcontractor.

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**26.2 Responsibility of Principal.** The creation of any subcontract relationship shall not relieve the hiring Party of any of its obligations under this GIA. The hiring Party shall be fully responsible to the other Party for the acts or omissions of any subcontractor the hiring Party hires as if no subcontract had been made; provided, however, that in no event shall Distribution Provider be liable for the actions or inactions of Interconnection Customer or its subcontractors with respect to obligations of Interconnection Customer

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under Article 5 of this GIA. Any applicable obligation imposed by this GIA upon the hiring Party shall be equally binding upon, and shall be construed as having application to, any subcontractor of such Party.

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**26.3 No Limitation by Insurance.** The obligations under this Article 26 will not be limited in any way by any limitation of subcontractor's insurance.

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**Article 27. Disputes**

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**27.1 Submission.** In the event either Party has a dispute, or asserts a claim, that arises out of or in connection with this GIA or its performance, such Party (the "disputing Party") shall provide the other Party with written notice of the dispute or claim ("Notice of Dispute"). Such dispute or claim shall be referred to a designated senior representative of each Party for resolution on an informal basis as promptly as practicable after receipt of the Notice of Dispute by the other Party. In the event the designated representatives are unable to resolve the claim or dispute through unassisted or assisted negotiations within thirty (30) Calendar Days of the other Party's receipt of the Notice of Dispute, such claim or dispute may, upon mutual agreement of the Parties, be submitted to arbitration and resolved in accordance with the arbitration procedures set forth below. In the event the Parties do not agree to submit such claim or dispute to arbitration, each Party may exercise whatever rights and remedies it may have in equity or at law consistent with the terms of this GIA.

**27.2 External Arbitration Procedures.** Any arbitration initiated under this GIA shall be conducted before a single neutral arbitrator appointed by the Parties. If the Parties fail to agree upon a single arbitrator within ten (10) Calendar Days of the submission of the dispute to arbitration, each Party shall choose one arbitrator who shall sit on a three-member arbitration panel. The two arbitrators so chosen shall within twenty (20) Calendar Days select a third arbitrator to chair the arbitration panel. In either case, the arbitrators shall be knowledgeable in electric utility matters, including electric transmission and bulk power issues, and shall not have any current or past substantial business or financial relationships with any party to the arbitration (except prior arbitration). The arbitrator(s) shall provide each of the Parties an opportunity to be heard and, except as otherwise provided herein, shall conduct the arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association ("Arbitration Rules") and any applicable FERC regulations; provided, however, in the event of a conflict between the Arbitration Rules and the terms of this Article 27, the terms of this Article 27 shall prevail.

**27.3 Arbitration Decisions.** Unless otherwise agreed by the Parties, the arbitrator(s) shall render a decision within ninety (90) Calendar Days of appointment and shall notify the Parties in writing of such decision and the reasons therefor. The arbitrator(s) shall be



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~~authorized only to interpret and apply the provisions of this GIA and shall have no power to modify or change any provision of this Agreement in any manner. The decision of the arbitrator(s) shall be final and binding upon the Parties, and judgment on the award may be entered in any court having jurisdiction. The decision of the arbitrator(s) may be appealed solely on the grounds that the conduct of the arbitrator(s), or the decision itself, violated the standards set forth in the Federal Arbitration Act or the Administrative Dispute Resolution Act. The final decision of the arbitrator must also be filed with FERC if it affects jurisdictional rates, terms and conditions of service, Interconnection Facilities, Distribution Upgrades, or Network Upgrades.~~

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**27.4** ~~Costs.~~ Each Party shall be responsible for its own costs incurred during the arbitration process and for the following costs, if applicable: (1) the cost of the arbitrator chosen by the Party to sit on the three member panel and one half of the cost of the third arbitrator chosen; or (2) one half the cost of the single arbitrator jointly chosen by the Parties.

**27.1** Disputes. Any dispute arising between Distribution Provider and an Interconnection Customer studied under the Independent Study Process regarding a Party's performance of its obligations under this Agreement or requirements related to the interconnection of the Generating Facility shall be resolved according to the procedures in Rule 21. Any dispute arising between Distribution Provider and an Interconnection Customer studied under the Transmission Cluster Study Process regarding a Party's performance of its obligations pursuant to the WDAT Tariff (e.g., any dispute regarding the Application Process, the Transmission Cluster Study Process, including the cost allocation of upgrades, the classification of upgrades as either Distribution Upgrades or Network Upgrades, posting of financial security and refunds) will be resolved pursuant to dispute resolution procedures in the WDAT Tariff. Any other dispute arising between Distribution Provider and an Interconnection Customer studied under the Transmission Cluster Study Process regarding a Party's performance of its obligations related to this Agreement or requirements related to the interconnection of the Generating Facility shall be resolved according to the procedures in Rule 21.

**Article 28. Representations, Warranties, and Covenants**

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**28.1 General.** Each Party makes the following representations, warranties and covenants:

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**28.1.1 Good Standing.** Such Party is duly organized, validly existing and in good standing under the laws of the state in which it is organized, formed, or incorporated, as applicable; that it is qualified to do business in the state or states in which the Generating Facility, Interconnection Facilities and Network Upgrades owned by such Party, as applicable, are located; and that it has the corporate power and authority to own its properties, to carry on its business as now being conducted and to enter into this GIA and carry out the transactions

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contemplated hereby and perform and carry out all covenants and obligations on its part to be performed under and pursuant to this GIA.

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**28.1.2 Authority.** Such Party has the right, power and authority to enter into this GIA, to become a Party hereto and to perform its obligations hereunder. This GIA is a legal, valid and binding obligation of such Party, enforceable against such Party in accordance with its terms, except as the enforceability thereof may be limited by applicable bankruptcy, insolvency, reorganization or other similar laws affecting creditors' rights generally and by general equitable principles (regardless of whether enforceability is sought in a proceeding in equity or at law).

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**28.1.3 No Conflict.** The execution, delivery and performance of this GIA does not violate or conflict with the organizational or formation documents, or bylaws or operating agreement, of such Party, or any judgment, license, permit, order, material agreement or instrument applicable to or binding upon such Party or any of its assets.

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**28.1.4 Consent and Approval.** Such Party has sought or obtained, or, in accordance with this GIA will seek or obtain, each consent, approval, authorization, order, or acceptance by any Governmental Authority in connection with the execution, delivery and performance of this GIA, and it will provide to any Governmental Authority notice of any actions under this GIA that are required by Applicable Laws and Regulations.

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**Article 29. [Reserved]**

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**Article 30. Miscellaneous**

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**30.1 Binding Effect.** This GIA and the rights and obligations hereof, shall be binding upon and shall inure to the benefit of the successors and assigns of the Parties hereto.

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**30.2 Conflicts.** In the event of a conflict between ~~the body of~~ this GIA and ~~any attachment, appendices or exhibits hereto~~ Rule 21, the terms and provisions of ~~the body of this GIA~~ Rule 21 shall prevail. ~~For Interconnection Customers studied under the Transmission Cluster Study Process, in the event of a conflict between applicable provisions of the WDAT Tariff and be deemed~~ Rule 21, the ~~final intent~~ provisions of the ~~Parties~~ WDAT Tariff shall prevail with respect to parts of the interconnection process performed under the WDAT Tariff; Rule 21 shall prevail with respect to all other matters.

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**30.3 Rules of Interpretation.** This GIA, unless a clear contrary intention appears, shall be construed and interpreted as follows: (1) the singular number includes the plural number and vice versa; (2) reference to any person includes such person's successors and assigns

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but, in the case of a Party, only if such successors and assigns are permitted by this GIA, and reference to a person in a particular capacity excludes such person in any other capacity or individually; (3) reference to any agreement (including this GIA), document, instrument or tariff means such agreement, document, instrument, or tariff as amended or modified and in effect from time to time in accordance with the terms thereof and, if applicable, the terms hereof; (4) reference to any Applicable Laws and Regulations means such Applicable Laws and Regulations as amended, modified, codified, or reenacted, in whole or in part, and in effect from time to time, including, if applicable, rules and regulations promulgated thereunder; (5) unless expressly stated otherwise, reference to any Article, Section or Appendix means such Article of this GIA or such Appendix to this GIA, **or such Section to the GIP or such Appendix to the GIP**, as the case may be; (6) “hereunder”, “hereof”, “herein”, “hereto” and words of similar import shall be deemed references to this GIA as a whole and not to any particular Article or other provision hereof or thereof; (7) “including” (and with correlative meaning “include”) means including without limiting the generality of any description preceding such term; and (8) relative to the determination of any period of time, “from” means “from and including”, “to” means “to but excluding” and “through” means “through and including”.

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**30.4 Entire Agreement.** This GIA, including all incorporated tariff provisions and the Appendices and Schedules attached hereto, constitutes the entire agreement between the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, between the Parties with respect to the subject matter of this GIA. There are no other agreements, representations, warranties, or covenants which constitute any part of the consideration for, or any condition to, either Party’s compliance with its obligations under this GIA.

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**30.5 No Third Party Beneficiaries.** This GIA is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and, where permitted, their assigns.

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**30.6 Waiver.** The failure of a Party to this GIA to insist, on any occasion, upon strict performance of any provision of this GIA will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

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Any waiver at any time by either Party of its rights with respect to this GIA shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this GIA. Termination or Default of this GIA for any reason by Interconnection Customer shall not constitute a waiver of Interconnection

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Customer's legal rights to obtain an interconnection from Distribution Provider. Any waiver of this GIA shall, if requested, be provided in writing.

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**30.7 Headings.** The descriptive headings of the various Articles of this GIA have been inserted for convenience of reference only and are of no significance in the interpretation or construction of this GIA.

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**30.8 Multiple Counterparts.** This GIA may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

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**30.9 Amendment.** The Parties may by mutual agreement amend this GIA by a written instrument duly executed by the Parties.

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**30.10 Modification by the Parties.** The Parties may by mutual agreement amend the Appendices to this GIA by a written instrument duly executed by the Parties. Such amendment shall become effective and a part of this GIA upon satisfaction of all Applicable Laws and Regulations.

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~~**30.11 Reservation of Rights.** Distribution Provider shall have the right to make a unilateral filing with FERC to modify this GIA with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation under section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder, and Interconnection Customer shall have the right to make a unilateral filing with FERC to modify this GIA pursuant to section 206 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by the other Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this GIA shall limit the rights of the Parties or of FERC under sections 205 or 206 of the Federal Power Act and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.~~

**30.11 Incorporation of Rule 21 into Agreement and CPUC Modification.** Rule 21, subject to any modifications the CPUC may direct in the exercise of its jurisdiction, is incorporated in its entirety into this GIA. Unless otherwise ordered by the CPUC, this GIA at all times shall be subject to such modifications as the CPUC may direct from time to time in the exercise of its jurisdiction. Notwithstanding the foregoing, if provisions of this GIA or the Parties' obligations are dictated by the WDAT Tariff or the results of the Transmission Cluster Study process under the WDAT Tariff (e.g., provisions related to the classification of upgrades as either Distribution Upgrades or Network Upgrades and the allocation of costs of facilities), they are not subject to modification by the CPUC.

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**30.12 No Partnership.** This GIA shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or to impose any partnership obligation or partnership liability upon either Party. Neither Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other Party.

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**IN WITNESS WHEREOF,** the Parties have executed this GIA in duplicate originals, each of which shall constitute and be an original effective Agreement between the Parties.

~~Insert name of Distribution Provider or Distribution Owner, if applicable~~

Pacific Gas and Electric Company,

By: \_\_\_\_\_ By: \_\_\_\_\_

Title: \_\_\_\_\_ Title: \_\_\_\_\_

Date: \_\_\_\_\_ Date: \_\_\_\_\_

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~~Insert name of Interconnection Customer~~ \_\_\_\_\_

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

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**Appendix A to GIA**

**Interconnection Facilities, Network Upgrades and Distribution Upgrades**

**1.- Interconnection Facilities:**

—(a) [insert Interconnection Customer's Interconnection Facilities];

—(b) [insert Distribution Provider's Interconnection Facilities];

**2.- Network Upgrades:**

—(a) [insert Stand Alone Network Upgrades];

(b) [insert Other Network Upgrades];

**3. -Distribution Upgrades:**

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**Appendix B to GIA**

**Milestones**

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**RULE 21 GENERATOR INTERCONNECTION AGREEMENT (GIA) FOR  
EXPORTING GENERATING FACILITIES INTERCONNECTING UNDER THE  
TRANSMISSION CLUSTER STUDY OR INDEPENDENT STUDY PROCESS**

**Appendix C to GIA**

**Interconnection Details**

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**Appendix D to GIA**

**Security Arrangements Details**

Infrastructure security of Distribution System and Transmission System equipment and operations and control hardware and software is essential to ensure day-to-day Distribution System reliability and operational security. ~~FERC~~The CPUC will expect the ~~ISO~~CAISO, all transmission providers, market participants, and interconnection customers interconnected to the Distribution System and Transmission System to comply with the recommendations offered by the President's Critical Infrastructure Protection Board and, eventually, best practice recommendations from the electric reliability authority. All public utilities will be expected to meet basic standards for system infrastructure and operational security, including physical, operational, and cyber-security practices.

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**Appendix E to GIA**

**Commercial Operation Date**

This Appendix E is a part of the GIA between Distribution Provider and Interconnection Customer.

**[Date]** \_\_\_\_\_

**[Distribution Provider Address]**

Re: \_\_\_\_\_ Generating Facility

Dear \_\_\_\_\_:

On **[Date]** **[Interconnection Customer]** has completed Trial Operation of Unit No. \_\_\_\_\_. This letter confirms that **[Interconnection Customer]** commenced Commercial Operation of Unit No. \_\_\_\_ at the Generating Facility, effective as of **[Date plus one day]**.

Thank you.

**[Signature]**

**[Interconnection Customer Representative]**

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**Appendix F to GIA**

**Addresses for Delivery of Notices and Billings**

**Notices:**

\_\_\_\_ Distribution Provider:

\_\_\_\_  
[To be supplied.]

\_\_\_\_ Interconnection Customer:

\_\_\_\_ [To be supplied.]

**Billings and Payments:**

\_\_\_\_ Distribution Provider:

\_\_\_\_ [To be supplied.]

\_\_\_\_ Interconnection Customer:

\_\_\_\_ [To be supplied.]

**Alternative Forms of Delivery of Notices (telephone, facsimile or email):**

\_\_\_\_ Distribution Provider:

\_\_\_\_ [To be supplied.]

\_\_\_\_ Interconnection Customer:

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———[To be supplied.]

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**Appendix G to GIA**

**Interconnection Customer's Proportional Share of Costs of Network Upgrades for  
Applicable Project ~~Group~~Cluster**

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**Appendix H to GIA**

**INTERCONNECTION REQUIREMENTS FOR A WIND GENERATING PLANT**

~~Appendix H sets forth requirements and provisions specific to a wind generating plant. All other requirements of this GIA continue to apply to wind generating plant interconnections.~~

**A. Technical Standards Applicable to a Wind Generating Plant**

**i. Low Voltage Ride-Through (LVRT) Capability**

~~A wind generating plant shall be able to remain online during voltage disturbances up to the time periods and associated voltage levels set forth in the standard below.~~

~~All wind generating plants subject to FERC Order No. 661 must meet the following requirements:~~

- ~~1. Wind generating plants are required to remain in service during three phase faults with normal clearing (which is a time period of approximately 4—9 cycles) and single line to ground faults with delayed clearing, and subsequent post fault voltage recovery to prefault voltage unless clearing the fault effectively disconnects the generator from the system. The clearing time requirement for a three phase fault will be specific to the wind generating plant substation location, as determined by and documented by the Distribution Provider. The maximum clearing time the wind generating plant shall be required to withstand for a three phase fault shall be 9 cycles after which, if the fault remains following the location-specific normal clearing time for three phase faults, the wind generating plant may disconnect from the electric system. A wind generating plant shall remain interconnected during such a fault on the electric system for a voltage level as low as zero volts, as measured at the high voltage side of the wind GSU.~~
- ~~2. This requirement does not apply to faults that would occur between the wind generator terminals and the high side of the GSU.~~
- ~~3. Wind generating plants may be tripped after the fault period if this action is intended as part of a special protection system.~~
- ~~4. Wind generating plants may meet the LVRT requirements of this standard by the performance of the generators or by installing additional equipment (e.g., Static VAR Compensator) within the wind generating plant or by a combination of generator performance and additional equipment.~~

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5. Existing individual generator units that are, or have been, interconnected to the network at the same location at the effective date of the Appendix H LVRT Standard are exempt from meeting the Appendix H LVRT Standard for the remaining life of the existing generation equipment. Existing individual generator units that are replaced are required to meet the Appendix H LVRT Standard.

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**ii. Power Factor Design Criteria (Reactive Power)**

A wind generating plant shall maintain a power factor within the range of 0.95 leading to 0.95 lagging, measured at the Point of Interconnection as defined in this GIA, if the Distribution Provider's Interconnection Studies shows that such a requirement is necessary to ensure safety or reliability. The power factor range standard can be met by using, for example, power electronics designed to supply this level of reactive capability (taking into account any limitations due to voltage level, real power output, etc.) or fixed and switched capacitors if agreed to by the Distribution Provider, or a combination of the two. The Interconnection Customer shall not disable power factor equipment while the wind plant is in operation. Wind plants shall also be able to provide sufficient dynamic voltage support in lieu of the power system stabilizer and automatic voltage regulation at the generator excitation system if the Interconnection Studies shows this to be required for system safety or reliability.

**iii. Supervisory Control and Data Acquisition (SCADA) Capability**

The wind plant shall provide SCADA capability to transmit data and receive instructions from the Distribution Provider to protect system reliability. The Distribution Provider and the wind plant Interconnection Customer shall determine what SCADA information is essential for the proposed wind plant, taking into account the size of the plant and its characteristics, location, and importance in maintaining generation resource adequacy and electric system reliability in its area.

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## RULE 21 INDEPENDENT STUDY PROCESS STUDY AGREEMENT

**THIS INDEPENDENT STUDY PROCESS STUDY AGREEMENT (“AGREEMENT”)** is made and entered into this \_\_\_ day of \_\_\_\_\_, 20\_\_ by and between \_\_\_\_\_, a \_\_\_\_\_ organized and existing under the laws of the State of \_\_\_\_\_, ("Applicant,") and Pacific Gas and Electric Company, a corporation existing under the laws of the State of California, ( "PG&E" or "Distribution Provider "). Applicant and Distribution Provider each may be referred to as a "Party," or collectively as the "Parties."

### RECITALS

**WHEREAS**, Distribution Provider, as a public utility in the State of California subject to the jurisdiction of the California Public Utilities Commission (“Commission”), provides non-discriminatory access to generating facilities wishing to interconnect to its Distribution System or Transmission System under the provisions of Rule 21 of its Tariffs; and

**WHEREAS**, Applicant is proposing to develop a Generating Facility or generating capacity addition to an existing Generating Facility consistent with the Interconnection Request submitted by Applicant dated \_\_\_\_\_ ; and

**WHEREAS**, Applicant desires to interconnect the Generating Facility with the Distribution System or Transmission System pursuant to the Independent Study Process; and

**WHEREAS**, the Applicant has requested Distribution Provider to perform Interconnection Studies to assess the system impact of interconnecting the Generating Facility to the Distribution System, Transmission System and any Affected Systems and to specify and estimate the cost of the equipment, engineering, procurement and construction work needed on the Distribution Provider’s electric system to physically and electrically connect the Generating Facility to the Distribution Provider’s Distribution System or Transmission System in accordance with Good Utility Practice;

**NOW, THEREFORE**, in consideration of and subject to the mutual covenants contained herein the Parties agree as follows:

- 1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated in Distribution Provider's Rule 21.
- 2.0 Applicant elects and Distribution Provider shall cause to be performed Interconnection Studies consistent with Section F.3.d of Rule 21.
- 3.0 The scope of the Interconnection Studies shall be subject to the assumptions set forth in Attachments A and, if applicable, Attachment B to this Agreement.

- 4.0 The Interconnection Studies will be based upon the technical information provided by Applicant in the Interconnection Request, as may be modified as the result of the Scoping Meeting, subject to any modifications in accordance with Section F.3.d of Rule 21. Any technical data supplied by Applicant is assumed to be complete and accurate. Distribution Provider is not required to verify any information or data provided by Applicant as part of the Interconnection Studies. Distribution Provider reserves the right to request additional technical information from Applicant as may reasonably become necessary consistent with Good Utility Practice during the course of the Interconnection Studies. Applicant shall provide the requested technical information to Distribution provider within 30 Calendar Days of a written request for such information. Distribution Provider may suspend the Interconnection Studies until such information is provided and the due date for completion of the Interconnection Studies shall be adjusted to reflect the suspension period. If Applicant modifies its designated Point of Interconnection, Interconnection Request, or the technical information provided therein is modified, the Interconnection Studies may be modified as specified in Rule 21.
- 5.0 The Interconnection Study report for each Interconnection Study shall provide the information specified in Rule 21.
- 6.0 Applicant shall provide Interconnection Financial Security in accordance with Rule 21 Section F.4, including Section F.4.b which requires the Applicant to provide the initial Interconnection Financial Security on or before sixty (60) Calendar Days after being provided with the final Interconnection System Impact Study report.
- 7.0 Unless the Parties agree to waive the Facilities Study in accordance with Section F.3.d.vii of Rule 21, within (i) five (5) Business Days following the results meeting, or (ii) within twenty-five (25) Business Days of the receipt of the final Interconnection System Impact Study report if no Interconnection System Impact Study results meeting is held, Applicant shall submit the Facilities Study deposit, if required, and any data required to Distribution Provider in accordance with Section F.3.d.vi of Rule 21.
- 8.0 Upon completion of the Interconnection Studies, Distribution Provider shall charge and Applicant shall pay the actual costs of the Interconnection Studies pursuant to Section E.3.a of Rule 21.
- 9.0 The Distribution Provider may provide copies of the Interconnection Studies results to the ISO, an Affected System Operator and the Western Electricity Coordinating Council. Requests for review and input from any Affected System Operators or the Western Electricity Coordinating Council may arrive at any time prior to interconnection.



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- 10.0 Substantial portions of technical data and assumptions used to perform the Interconnection Studies, such as system conditions, existing and planned generation, and unit modeling, may change, other than changes described in Section 4, after the Distribution Provider provides the Interconnection Studies results to the Applicant. Interconnection Studies results will reflect available data at the time the Distribution Provider provides the Interconnection Study reports to the Applicant. If new data is provided after Distribution Provider has begun work on the Interconnection Studies, Distribution Provider is not responsible for updating the Interconnection Studies to reflect new information or a change in information used in the Interconnection Studies. Distribution Provider may determine that a new study, or revision or reevaluation of the Interconnection Studies is required. In that event, Applicant shall either enter into a separate agreement providing that it shall reimburse Distribution Provider for the costs of such new or revised study or its Interconnection Request will be deemed withdrawn. The Distribution Provider shall not be responsible for any additional costs, including, without limitation, costs of new or additional facilities, system upgrades, or schedule changes, that may be required as a result of changes in such data and assumptions.
- 11.0 The Distribution Provider shall maintain records and accounts of all costs incurred in performing the Interconnection Studies in sufficient detail to allow verification of all costs incurred, including associated overheads. The Applicant shall have the right, upon reasonable notice, at the Distribution Provider's offices and at its own expense, to audit the Distribution Provider's records as necessary and as appropriate in order to verify costs incurred by the Distribution Provider. Any audit requested by the Applicant shall be completed, and written notice of any audit dispute provided to the Distribution Provider, within one hundred eighty (180) Calendar Days following receipt by the Applicant of the Distribution Provider's notification of the final costs of the Interconnection Studies.
- 12.0 In accordance with Section F.6 of Rule 21, the Applicant may withdraw its Interconnection Request at any time by written notice to the Distribution Provider. Upon receipt of such notice, this Agreement shall terminate, subject to the requirements of Section D.7 and E.3.a of Rule 21.
- 13.0 This Agreement shall become effective upon the date the fully executed Agreement and the Detailed Study deposit as required by Section E.3.a are received by the Distribution Provider. If the Distribution Provider does not receive the fully executed Agreement and Detailed Study deposit pursuant to Section F.3.d of Rule 21 within thirty (30) Business Days after the scoping meeting, then the Interconnection Request will be deemed withdrawn.
- 14.0 Miscellaneous.
- 14.1 Dispute Resolution. Any dispute arising out of or in connection with the Agreement shall be subject to the dispute resolution provisions of Rule 21.
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- 14.2 Confidentiality. Confidential Information shall be treated in accordance with Section D.7 of Rule 21.
- 14.3 Binding Effect. This Agreement and the rights and obligations hereof, shall be binding upon and shall inure to the benefit of the successors and assigns of the Parties hereto.
- 14.4 Conflicts. In the event of a conflict between the body of this Agreement and any attachment, appendices or exhibits hereto, the terms and provisions of the body of this Agreement shall prevail and be deemed the final intent of the Parties.
- 14.5 Rules of Interpretation. This Agreement, unless a clear contrary intention appears, shall be construed and interpreted as follows: (1) the singular number includes the plural number and vice versa; (2) reference to any person includes such person's successors and assigns but, in the case of a Party, only if such successors and assigns are permitted by this Agreement, and reference to a person in a particular capacity excludes such person in any other capacity or individually; (3) reference to any agreement (including this Agreement), document, instrument or tariff means such agreement, document, instrument, or tariff as amended or modified and in effect from time to time in accordance with the terms thereof and, if applicable, the terms hereof; (4) reference to any applicable laws and regulations means such applicable laws and regulations as amended, modified, codified, or reenacted, in whole or in part, and in effect from time to time, including, if applicable, rules and regulations promulgated thereunder; (5) unless expressly stated otherwise, reference to any Article, Section or Appendix means such Article or Section of this Agreement or such Appendix to this Agreement, or such Section of Rule 21 or such Appendix to Rule 21, as the case may be; (6) "hereunder", "hereof", "herein", "hereto" and words of similar import shall be deemed references to this Agreement as a whole and not to any particular Article Section, or other provision hereof or thereof; (7) "including" (and with correlative meaning "include") means including without limiting the generality of any description preceding such term; and (8) relative to the determination of any period of time, "from" means "from and including", "to" means "to but excluding" and "through" means "through and including".
- 14.6 Entire Agreement. This Agreement, including all Appendices and Schedules attached hereto, constitutes the entire agreement between the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, between the Parties with respect to the subject matter of this Agreement. There are no other agreements, representations, warranties, or covenants

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which constitute any part of the consideration for, or any condition to, any Party's compliance with its obligations under this Agreement.

14.7 No Third Party Beneficiaries. This Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and, where permitted, their assigns.

14.8 Waiver. The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

Any waiver at any time by either Party of its rights with respect to this Agreement shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, or duty of this Agreement. Termination or default of this Agreement for any reason by the Applicant shall not constitute a waiver of the Applicant's legal rights to obtain an interconnection from the Distribution Provider. Any waiver of this Agreement shall, if requested, be provided in writing.

14.9 Headings. The descriptive headings of the various Articles and Sections of this Agreement have been inserted for convenience of reference only and are of no significance in the interpretation or construction of this Agreement

14.10 Multiple Counterparts. This Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

14.11 Amendment. The Parties may by mutual agreement amend this Agreement by a written instrument duly executed by both of the Parties.

14.12 Modification by the Parties. The Parties may by mutual agreement amend the Appendices to this Agreement by a written instrument duly executed by both of the Parties. Such amendment shall become effective and a part of this Agreement upon satisfaction of all applicable laws and regulations.

14.13 No Partnership. This Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or to impose any partnership obligation or partnership liability upon any Party. No Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to

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act as or be an agent or representative of, or to otherwise bind, another Party.

14.14 Assignment. This Agreement may be assigned by a Party only with the written consent of the other Party; provided that a Party may assign this Agreement without the consent of the other Party to any Affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this Agreement; and provided further that the Applicant shall have the right to assign this Agreement, without the consent of the other Party, for collateral security purposes to aid in providing financing for the Generating Facility, provided that the Applicant will require any secured party, trustee or mortgagee to notify the other Party of any such assignment. Any financing arrangement entered into by the Applicant pursuant to this Section will provide that prior to or upon the exercise of the secured party's, trustee's or mortgagee's assignment rights pursuant to said arrangement, the secured creditor, the trustee or mortgagee will notify the other Party of the date and particulars of any such exercise of assignment right(s). Any attempted assignment that violates this Section is void and ineffective. Any assignment under this Agreement shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

14.15 This Agreement is subject to the applicable provisions of PG&E's tariffs, including Rule 21, as filed and authorized by the California Public Utilities Commission ("CPUC"). This Agreement shall at all times be subject to such changes or modifications by the CPUC, as the CPUC may, from time to time, direct in the exercise of its jurisdiction.

**IN WITNESS THEREOF**, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**[Insert name of Distribution Provider, if applicable]**

By: \_\_\_\_\_ By: \_\_\_\_\_

Printed Name: \_\_\_\_\_ Printed Name: \_\_\_\_\_

Title: \_\_\_\_\_ Title: \_\_\_\_\_

Date: \_\_\_\_\_ Date: \_\_\_\_\_

**[Insert name of Applicant]**

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By: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

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**Attachment A  
Independent Study Process  
Study Agreement**

**ASSUMPTIONS USED IN CONDUCTING THE  
INTERCONNECTION SYSTEM IMPACT STUDY**

The Interconnection System Impact Study will be based upon the information set forth in the Interconnection Request and agreed upon in the Scoping Meeting held on \_\_\_\_\_, subject to any modifications in accordance with Section F.3.d of Rule 21, and the following assumptions:

Designation of Point of Interconnection and configuration to be studied.

Additional Comments:

**Attachment B**  
**Independent Study Process**  
**Study Agreement**

**DATA FORM TO BE PROVIDED BY APPLICANT**

**This Attachment B is to be provided prior to the commencement of the Interconnection Facilities Study**

Generating Facility size (MW): \_\_\_\_\_

Provide location plan and simplified one-line diagram of the plant and station facilities. For staged projects, please indicate future generation, transmission circuits, etc.

One set of metering is required for each generation connection to the new ring bus or existing Distribution Provider station. Number of generation connections: \_\_\_\_\_

On the one line diagram indicate the generation capacity attached at each metering location. (Maximum load on CT/PT)

On the one line diagram indicate the location of auxiliary power. (Minimum load on CT/PT)  
Amps

Will an alternate source of auxiliary power be available during CT/PT maintenance?  
\_\_\_\_\_ Yes      \_\_\_\_\_ No

Will a transfer bus on the generation side of the metering require that each meter set be designed for the total plant generation?      \_\_\_\_\_ Yes      \_\_\_\_\_ No (Please indicate on one line diagram).

What type of control system or PLC will be located at Applicant's Generating Facility?

\_\_\_\_\_

What protocol does the control system or PLC use?

\_\_\_\_\_

Please provide a 7.5-minute quadrangle of the site. Sketch the plant, station, transmission line, and property line.

Physical dimensions of the proposed interconnection station:

\_\_\_\_\_ Bus length  
from generation to interconnection station:

\_\_\_\_\_

---

Line length from interconnection station to Distribution Provider's transmission line.

---

Tower number observed in the field. (Painted on tower leg)\* 

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Number of third party easements required for transmission lines\*:

---

\* To be completed in coordination with Distribution Provider.

Is the Generating Facility in the Distribution Provider's service area?

---

Yes 

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No Local provider: 

---

Please provide proposed schedule dates (not required for projects 5 MWs or less):

Environmental survey start: Date 

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Environmental impact report submittal: Date 

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Procurement of project equipment: Date 

---

Begin Construction Date: 

---

Generator step-up transformer  
receives back feed power Date: 

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Generation Testing Date: 

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Commercial Operation Date: 

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## RULE 21 INDEPENDENT STUDY PROCESS STUDY AGREEMENT

### ~~APPENDIX 4 to GIP~~

### ~~INDEPENDENT STUDY PROCESS STUDY AGREEMENT~~ ~~For the Independent Study Process~~

~~THIS INDEPENDENT STUDY PROCESS STUDY AGREEMENT~~  
(“~~AGREEMENT~~”) is made and entered into this \_\_\_ day of \_\_\_\_\_, 20\_\_ by and between \_\_\_\_\_, a \_\_\_\_\_ organized and existing under the laws of the State of \_\_\_\_\_, (“~~Interconnection Customer~~” \_\_\_\_\_ (“~~Applicant~~,”) and \_\_\_\_\_ Pacific Gas and Electric Company, a \_\_\_\_\_ corporation existing under the laws of the State of \_\_\_\_\_ (“~~California~~,” (“PG&E” or “Distribution Provider”). ~~Interconnection Customer~~ ~~Applicant~~ and Distribution Provider each may be referred to as a “Party,” or collectively as the “Parties.”

### RECITALS

**WHEREAS,** ~~Interconnection Customer~~ Distribution Provider, as a public utility in the State of California subject to the jurisdiction of the California Public Utilities Commission (“Commission”), provides non-discriminatory access to generating facilities wishing to interconnect to its Distribution System or Transmission System under the provisions of Rule 21 of its Tariffs; and

**WHEREAS,** ~~Applicant~~ is proposing to develop a Generating Facility or generating capacity addition to an existing Generating Facility consistent with the Interconnection Request submitted by ~~Interconnection Customer~~ ~~Applicant~~ dated \_\_\_\_\_; and

**WHEREAS,** ~~Interconnection Customer~~ ~~Applicant~~ desires to interconnect the Generating Facility with the Distribution System or Transmission System pursuant to the Independent Study Process; and

**WHEREAS,** the ~~Interconnection Customer~~ ~~Applicant~~ has requested Distribution Provider to perform Interconnection Studies to assess the system impact of interconnecting the Generating Facility to the Distribution System, Transmission System and any Affected Systems and to specify and estimate the cost of the equipment, engineering, procurement and construction work needed on the Distribution Provider’s electric system to physically and electrically connect the Generating Facility to the Distribution Provider’s Distribution System or Transmission System in accordance with Good Utility Practice;

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RULE 21 INDEPENDENT STUDY PROCESS STUDY AGREEMENT

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**NOW, THEREFORE**, in consideration of and subject to the mutual covenants contained herein the Parties ~~agreed~~agree as follows:

- 1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated in Distribution Provider's ~~FERC approved GIP~~Rule 21.
- 2.0 ~~Interconnection Customer~~Applicant elects and Distribution Provider shall cause to be performed Interconnection Studies consistent with Section ~~5.8F.3.d~~ of ~~the GIP~~Rule 21.
- 3.0 The scope of the Interconnection Studies shall be subject to the assumptions set forth in Attachments A and, if applicable, Attachment B to this Agreement.

RULE 21 INDEPENDENT STUDY PROCESS STUDY AGREEMENT

- 4.0 The Interconnection Studies will be based upon the technical information provided by ~~Interconnection Customer~~ Applicant in the Interconnection Request, as may be modified as the result of the Scoping Meeting, subject to any modifications in accordance with Section ~~5.8.1.5~~ F.3.d of Rule 21. Any technical data supplied by Applicant is assumed to be complete and accurate. Distribution Provider is not required to verify any information or data provided by Applicant as part of the GIP-Interconnection Studies. Distribution Provider reserves the right to request additional technical information from ~~Interconnection Customer~~ Applicant as may reasonably become necessary consistent with Good Utility Practice during the course of the Interconnection Studies. ~~If Interconnection Customer~~ Applicant shall provide the requested technical information to Distribution provider within 30 Calendar Days of a written request for such information. Distribution Provider may suspend the Interconnection Studies until such information is provided and the due date for completion of the Interconnection Studies shall be adjusted to reflect the suspension period. ~~If Applicant~~ modifies its designated Point of Interconnection, Interconnection Request, or the technical information provided therein is modified, the Interconnection Studies may be modified as specified in ~~the GIP~~ Rule 21.
- 5.0 The Interconnection Study report for each Interconnection Study shall provide the information specified in ~~the GIP~~ Rule 21.
- 6.0 ~~Interconnection Customer~~ Applicant shall provide Interconnection Financial Security in accordance with ~~GIP~~ Rule 21 Section ~~5.9.2~~ F.4, including Section F.4.b which requires the Applicant to provide the initial Interconnection Financial Security on or before sixty (60) Calendar Days after being provided with the final Interconnection System Impact Study report.
- ~~7~~ 7.0 Unless the Parties agree to waive the Facilities Study in accordance with Section F.3.d.vii of Rule 21, within (i) five (5) Business Days following the results meeting, or (ii) within twenty-five (25) Business Days of the receipt of the final Interconnection System Impact Study report if no Interconnection System Impact Study results meeting is held, Applicant shall submit the Facilities Study deposit, if required, and any data required to Distribution Provider in accordance with Section F.3.d.vi of Rule 21.
- ~~8~~ 8.0 Upon completion of the Interconnection Studies, Distribution Provider shall charge and ~~Interconnection Customer~~ Applicant shall pay the actual costs of the Interconnection Studies pursuant to Section ~~E.3.2.3.4a~~ of ~~the GIP~~ Rule 21.
- ~~89~~ 9.0 The Distribution Provider may provide copies of the Interconnection Studies results to the ISO, an Affected System Operator and the Western Electricity Coordinating Council. Requests for review and input from any Affected System

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Operators or the Western Electricity Coordinating Council may arrive at any time prior to interconnection.

~~910.0~~ Substantial portions of technical data and assumptions used to perform the Interconnection Studies, such as system conditions, existing and planned generation, and unit modeling, may change, other than changes described in Section 4, after the Distribution Provider provides the Interconnection Studies results to the ~~Interconnection Customer~~Applicant. Interconnection Studies results will reflect available data at the time the Distribution Provider provides the Interconnection Study reports to the ~~Interconnection Customer~~Applicant. If new data is provided after Distribution Provider has begun work on the Interconnection Studies, Distribution Provider is not responsible for updating the Interconnection Studies to reflect new information or a change in information used in the Interconnection Studies. Distribution Provider may determine that a new study, or revision or reevaluation of the Interconnection Studies is required. In that event, Applicant shall either enter into a separate agreement providing that it shall reimburse Distribution Provider for the costs of such new or revised study or its Interconnection Request will be deemed withdrawn. The Distribution Provider shall not be responsible for any additional costs, including, without limitation, costs of new or additional facilities, system upgrades, or schedule changes, that may be ~~incurred by the Interconnection Customer~~required as a result of changes in such data and assumptions.

~~1011.0~~ The Distribution Provider shall maintain records and accounts of all costs incurred in performing the Interconnection Studies in sufficient detail to allow verification of all costs incurred, including associated overheads. The ~~Interconnection Customer~~Applicant shall have the right, upon reasonable notice, ~~within a reasonable time~~ at the Distribution Provider's offices and at its own expense, to audit the Distribution Provider's records as necessary and as appropriate in order to verify costs incurred by the Distribution Provider. Any audit requested by the ~~Interconnection Customer~~Applicant shall be completed, and written notice of any audit dispute provided to the Distribution Provider, within one hundred eighty (180) Calendar Days following receipt by the ~~Interconnection Customer~~Applicant of the Distribution Provider's notification of the final costs of the Interconnection Studies.

~~1112.0~~ In accordance with Section ~~3.9F.6~~ of Rule 21, the ~~GIP, the Interconnection Customer~~Applicant may withdraw its Interconnection Request at any time by written notice to the Distribution Provider. Upon receipt of such notice, this Agreement shall terminate, subject to the requirements of Section ~~5.2.1.4D.7~~ and ~~11.1E.3.a~~ of ~~the GIP~~Rule 21.

~~1213.0~~ This Agreement shall become effective upon the date the fully executed

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Agreement ~~is~~ and the Detailed Study deposit as required by Section E.3.a are received by the Distribution Provider. If the Distribution Provider does not receive the fully executed Agreement and Detailed Study deposit pursuant to Section ~~5.7F.3.d~~ of Rule 21 within thirty (30) Business Days after the GIP scoping meeting, then the Interconnection Request will be deemed withdrawn ~~upon the Interconnection Customer's receipt of written notice by the Distribution Provider pursuant to Section 3.9 of the GIP.~~

~~13.14.0~~ 14.0 Miscellaneous.

~~13.14.1~~ 14.1 Dispute Resolution.

~~13.1.1~~ 14.1.1 — Submission. In the event either Party has a Any dispute, or asserts a claim, that arises arising out of or in connection with ~~this~~ the Agreement or its performance, such Party (the “disputing Party”) shall provide the other Party with written notice of the dispute or claim (“Notice of Dispute”). ~~Such dispute or claim shall be referred~~ subject to a designated senior representative of each Party for the dispute resolution on an informal basis as promptly as practicable after receipt of the Notice of Dispute by the other Party. In the event the designated representatives are unable to resolve the claim or dispute through unassisted or assisted negotiations within thirty (30) Calendar Days of the other Party's receipt of the Notice of Dispute, such claim or dispute may, upon mutual agreement of the Parties, be submitted to arbitration and resolved in accordance with the arbitration procedures set forth below. In the event the Parties do not agree to submit such claim or dispute to arbitration, each Party may exercise whatever rights and remedies it may have in equity or at law consistent with the terms of the GIP.

~~13.1.2~~ 14.1.2 — External Arbitration Procedures. Any arbitration initiated under this Agreement shall be conducted before a single neutral arbitrator appointed by the Parties. If the Parties fail to agree upon a single arbitrator within ten (10) Calendar Days of the submission of the dispute to arbitration, each Party shall choose one arbitrator who shall sit on a three member arbitration panel. The two arbitrators so chosen shall within twenty (20) Calendar Days select a third arbitrator to chair the arbitration panel. In either case, the arbitrators shall be knowledgeable in electric utility matters, including electric transmission and bulk power issues, and shall not have any current or past substantial business or financial relationships with any party to the arbitration (except prior arbitration). The arbitrator(s) shall provide each of the Parties an opportunity to be heard and, except as otherwise provided herein, shall conduct the arbitration in accordance with the Commercial Arbitration

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~~Rules of the American Arbitration Association ("Arbitration Rules") and any applicable FERC regulations; provided, however, in the event of a conflict between the Arbitration Rules and the terms of this Section 13.1.2, the terms of this Section 13.1.2 shall prevail.~~

~~13.1.3 — Arbitration Decisions. Unless otherwise agreed by the Parties, the arbitrator(s) shall render a decision within ninety (90) Calendar Days of appointment and shall notify the Parties in writing of such decision and the reasons therefor. The arbitrator(s) shall be authorized only to interpret and apply the provisions of the Agreement and shall have no power to modify or change any provision of this Agreement in any manner. The decision of the arbitrator(s) shall be final and binding upon the Parties, and judgment on the award may be entered in any court having jurisdiction. The decision of the arbitrator(s) may be appealed solely on the grounds that the conduct of the arbitrator(s), or the decision itself, violated the standards set forth in the Federal Arbitration Act or the Administrative Dispute Resolution Act. The final decision of the arbitrator must also be filed with FERC if it affects jurisdictional rates, terms and conditions of service, Interconnection Facilities, Distribution Upgrades, or Network Upgrades~~Rule 21.

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~~13.1.4 — Costs. Each Party shall be responsible for its own costs incurred during the arbitration process and for the following costs, if applicable: (1) the cost of the arbitrator chosen by the Party to sit on the three member panel and one half of the cost of the third arbitrator chosen; or (2) one half the cost of the single arbitrator jointly chosen by the Parties.~~

~~13.1.2~~14.2 Confidentiality. Confidential Information shall be treated in accordance with Section ~~11.1.D.7~~14.2 of ~~the GIP~~Rule 21.

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~~13.1.3~~14.3 Binding Effect. This Agreement and the rights and obligations hereof, shall be binding upon and shall inure to the benefit of the successors and assigns of the Parties hereto.

~~13.1.4~~14.4 Conflicts. In the event of a conflict between the body of this Agreement and any attachment, appendices or exhibits hereto, the terms and provisions of the body of this Agreement shall prevail and be deemed the final intent of the Parties.

~~13.1.5~~14.5 Rules of Interpretation. This Agreement, unless a clear contrary intention appears, shall be construed and interpreted as follows: (1) the singular number includes the plural number and vice versa; (2) reference to any person includes such person's successors and assigns but, in the case of a

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Party, only if such successors and assigns are permitted by this Agreement, and reference to a person in a particular capacity excludes such person in any other capacity or individually; (3) reference to any agreement (including this Agreement), document, instrument or tariff means such agreement, document, instrument, or tariff as amended or modified and in effect from time to time in accordance with the terms thereof and, if applicable, the terms hereof; (4) reference to any applicable laws and regulations means such applicable laws and regulations as amended, modified, codified, or reenacted, in whole or in part, and in effect from time to time, including, if applicable, rules and regulations promulgated thereunder; (5) unless expressly stated otherwise, reference to any Article, Section or Appendix means such Article or Section of this Agreement or such Appendix to this Agreement, or such Section of ~~the GIP~~ Rule 21 or such Appendix to ~~the GIP~~ Rule 21, as the case may be; (6) “hereunder”, “hereof”, “herein”, “hereto” and words of similar import shall be deemed references to this Agreement as a whole and not to any particular Article Section, or other provision hereof or thereof; (7) “including” (and with correlative meaning “include”) means including without limiting the generality of any description preceding such term; and (8) relative to the determination of any period of time, “from” means “from and including”, “to” means “to but excluding” and “through” means “through and including”.

~~13~~14.6 Entire Agreement. This Agreement, including all Appendices and Schedules attached hereto, constitutes the entire agreement between the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, between the Parties with respect to the subject matter of this Agreement. There are no other agreements, representations, warranties, or covenants which constitute any part of the consideration for, or any condition to, any Party’s compliance with its obligations under this Agreement.

~~13~~14.7 No Third Party Beneficiaries. This Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and, where permitted, their assigns.

~~13~~14.8 Waiver. The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

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Any waiver at any time by either Party of its rights with respect to this Agreement shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, or duty of this Agreement. Termination or default of this Agreement for any reason by the Interconnection Customer/Applicant shall not constitute a waiver of the Interconnection Customer's/Applicant's legal rights to obtain an interconnection from the Distribution Provider. Any waiver of this Agreement shall, if requested, be provided in writing.

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13.14.9 Headings. The descriptive headings of the various Articles and Sections of this Agreement have been inserted for convenience of reference only and are of no significance in the interpretation or construction of this Agreement

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13.14.10 Multiple Counterparts. This Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

13.14.11 Amendment. The Parties may by mutual agreement amend this Agreement by a written instrument duly executed by both of the Parties.

13.14.12 Modification by the Parties. The Parties may by mutual agreement amend the Appendices to this Agreement by a written instrument duly executed by both of the Parties. Such amendment shall become effective and a part of this Agreement upon satisfaction of all applicable laws and regulations.\_\_\_\_

~~13.13 Reservation of Rights. The Distribution Provider shall have the right to make a unilateral filing with FERC to modify this Agreement with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation under section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder, and Interconnection Customer shall have the right to make a unilateral filing with FERC to modify this Agreement pursuant to section 206 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by another Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under sections 205 or 206 of the Federal Power Act and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.~~



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~~13.14~~14.13 No Partnership. This Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or to impose any partnership obligation or partnership liability upon any Party. No Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, another Party.

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~~13.15~~14.14 Assignment. This Agreement may be assigned by a Party only with the written consent of the other Party; provided that a Party may assign this Agreement without the consent of the other Party to any Affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this Agreement; and provided further that the Interconnection Customer Applicant shall have the right to assign this Agreement, without the consent of the other Party, for collateral security purposes to aid in providing financing for the Generating Facility, provided that the Interconnection Customer Applicant will require any secured party, trustee or mortgagee to notify the other Party of any such assignment. Any financing arrangement entered into by the Interconnection Customer Applicant pursuant to this Section will provide that prior to or upon the exercise of the secured party's, trustee's or mortgagee's assignment rights pursuant to said arrangement, the secured creditor, the trustee or mortgagee will notify the other Party of the date and particulars of any such exercise of assignment right(s). Any attempted assignment that violates this Section is void and ineffective. Any assignment under this Agreement shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

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14.15 This Agreement is subject to the applicable provisions of PG&E's tariffs, including Rule 21, as filed and authorized by the California Public Utilities Commission ("CPUC"). This Agreement shall at all times be subject to such changes or modifications by the CPUC, as the CPUC may, from time to time, direct in the exercise of its jurisdiction.

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**IN WITNESS THEREOF**, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

[Insert name of Distribution Provider ~~or Distribution Owner~~, if applicable]

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By: \_\_\_\_\_ By: \_\_\_\_\_

Printed Name: \_\_\_\_\_ Printed Name: \_\_\_\_\_

Title: \_\_\_\_\_ Title: \_\_\_\_\_

Date: \_\_\_\_\_ Date: \_\_\_\_\_

[Insert name of ~~Interconnection Customer~~Applicant]

By: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

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**Attachment A**  
**Independent Study Process**  
**Study Agreement**

**ASSUMPTIONS USED IN CONDUCTING THE**  
**INTERCONNECTION SYSTEM IMPACT STUDY**

The Interconnection System Impact Study will be based upon the information set forth in the Interconnection Request and agreed upon in the Scoping Meeting held on \_\_\_\_\_, subject to any modifications in accordance with Section 5.8.1.5F.3.d of ~~the GIP~~ Rule 21, and the following assumptions:

Designation of Point of Interconnection and configuration to be studied.

Deliverability status requested (full capacity or energy only)\_\_\_\_\_

Additional Comments:

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**Attachment B**  
**Independent Study Process**  
**Study Agreement**

**DATA FORM TO BE PROVIDED BY ~~INTERCONNECTION CUSTOMER~~ PRIOR TO  
COMMENCEMENT OF THE INTERCONNECTION FACILITIES STUDY  
APPLICANT**

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**This Attachment B is to be provided prior to the commencement of the Interconnection  
Facilities Study**

Generating Facility size (MW): \_\_\_\_\_

Provide location plan and simplified one-line diagram of the plant and station facilities. For staged projects, please indicate future generation, transmission circuits, etc.

One set of metering is required for each generation connection to the new ring bus or existing Distribution Provider station. Number of generation connections: \_\_\_\_\_

On the one line diagram indicate the generation capacity attached at each metering location. (Maximum load on CT/PT)

On the one line diagram indicate the location of auxiliary power. (Minimum load on CT/PT)  
Amps

Will an alternate source of auxiliary power be available during CT/PT maintenance?  
\_\_\_\_ Yes      \_\_\_\_ No

Will a transfer bus on the generation side of the metering require that each meter set be designed for the total plant generation?      \_\_\_\_ Yes      \_\_\_\_ No (Please indicate on one line diagram).

What type of control system or PLC will be located at ~~Interconnection Customer's~~ Applicant's Generating Facility?

What protocol does the control system or PLC use?

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Please provide a 7.5-minute quadrangle of the site. Sketch the plant, station, transmission line, and property line.

Physical dimensions of the proposed interconnection station:

Automated Document, Preliminary Statement A

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\_\_\_\_\_ Bus length  
 from generation to interconnection station:  
 \_\_\_\_\_

Line length from interconnection station to Distribution Provider's transmission line.  
 \_\_\_\_\_

Tower number observed in the field. (Painted on tower leg)\* \_\_\_\_\_

Number of third party easements required for transmission lines\*:  
 \_\_\_\_\_

\* To be completed in coordination with Distribution Provider.

Is the Generating Facility in the Distribution Provider's service area?

\_\_\_\_\_ Yes    \_\_\_\_\_ No    Local provider: \_\_\_\_\_

Please provide proposed schedule dates: (not required for projects 5 MWs or less):

Environmental survey start:                      Date \_\_\_\_\_

Environmental impact report submittal:      Date \_\_\_\_\_

Procurement of project equipment:          Date \_\_\_\_\_

Begin Construction                                  Date: \_\_\_\_\_

Generator step-up transformer  
 receives back feed power                      Date: \_\_\_\_\_

Generation Testing                                  Date: \_\_\_\_\_

Commercial Operation                              Date: \_\_\_\_\_

~~Level of ISO Grid Deliverability: Choose one of the following:~~

\_\_\_\_\_ ~~Energy Only~~

\_\_\_\_\_ ~~Full Capacity~~

Automated Document, Preliminary Statement A

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## RULE 21 PRE-APPLICATION REPORT REQUEST

Upon receipt of a completed Pre-Application Report Request and a non-refundable processing fee of \$300, the Distribution Provider shall provide pre-application data described below within 10 business days of receipt.

The Pre-Application Report will include the following information if available:

- a. Total Capacity (MW) of substation/area bus or bank and circuit likely to serve proposed site.
- b. Allocated Capacity (MW) of substation/area bus or bank and circuit likely to serve proposed site.
- c. Queued Capacity (MW) of substation/area bus or bank and circuit likely to serve proposed site.
- d. Available Capacity (MW) of substation/area bus or bank and circuit most likely to serve proposed site.
- e. Substation nominal distribution voltage or transmission nominal voltage if applicable.
- f. Nominal distribution circuit voltage at the proposed site.
- g. Approximate circuit distance between the proposed site and the substation.
- h. Relevant Line Section(s) peak line load estimate, and minimum load data, when available.
- i. Number of protective devices and number of voltage regulating devices between the proposed site and the substation/area.
- j. Whether or not three-phase power is available at the site.
- k. Limiting conductor rating from proposed Point of Interconnection to distribution substation.
- l. Based on proposed Point of Interconnection, existing or known constraints such as, but not limited to, electrical dependencies at that location, short circuit interrupting capacity issues, power quality or stability issues on the circuit, capacity constraints or secondary networks.

The Pre-Application Report need only include pre-existing data. A Pre-Application Report request does not obligate Distribution Provider to conduct a study or other analysis of the proposed project in the event that data is not available. If Distribution Provider cannot complete all or some of a Pre-Application Report due to lack of available data, Distribution Provider will provide applicant with a Pre-Application Report that includes the information that is available.

In requesting a Pre-Application Report, applicant understands that 1) the existence of “Available Capacity” in no way implies that an interconnection up to this level may be completed without impacts since there are many variables studied as part of the interconnection review process, 2) the distribution system is dynamic and subject to change and 3) data provided in the Pre-Application Report may become outdated and not useful at the time of submission of the

**PG&E RULE 21 PRE-APPLICATION REPORT REQUEST**

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complete Interconnection Request. Notwithstanding any of the provisions of this Section, Distribution Provider shall, in good faith, provide Pre-Application Report data that represents the best available information at the time of reporting.

1. This Pre-Application Report Request is for (check only one):

- ☐ A proposed new Generating Facility.  
☐ An increase in the generating capacity or a Material Modification of an existing Generating Facility.

This Pre-Application Report Request is for (check only one):

- ☐ A project that **will export** power to the PG&E system.  
☐ A project that **will not export** power to the PG&E system.

2. Applicant provides the following information (**if available**):

- a. Approximate proposed Point of Interconnection. The proposed Point of Interconnection shall be defined by latitude and longitude, site map, street address, utility equipment number (e.g. pole number), meter number, account number or some combination of the above sufficient to clearly identify the location of the Point of Interconnection. In the case of an existing Generating Facility, the name and specific location, including the county, of the existing Generating Facility;

Project Name:

Project Location:

Street Address:

City:

County:

Zip Code:

Latitude (in degrees/minutes/seconds OR 6 decimal places):

Longitude (in degrees/minutes/seconds OR 6 decimal places):

Utility Equipment Number [nearest one (ex. pole number 1234567E, transformer number T12345)]:

Meter Badge Number (Old meter #'s are 6 characters – one alpha numeric interspersed. New Smart Meters start with 100, followed by 7 digits – 10 characters total.):

Account Number (ex. 012345678-9):

Proposed Nominal Service Voltage (ex. 480V, 12kV, etc.):



**PG&E RULE 21 PRE-APPLICATION REPORT REQUEST**

b. **Attach copy of site map for proposed project.** Site map should show:

- True north
- Proposed project location, including general area of project
- Proposed service point location
- Major roads, streets and/or highways

c. Generation Technology, Fuel Source (i.e., gas turbine, hydro turbine, wind turbine, etc.) and optionally MW;

<input type="checkbox"/> Cogeneration	_____ MW	Fuel Source: _____
<input type="checkbox"/> Reciprocating Engine	_____ MW	Fuel Source: _____
<input type="checkbox"/> Biomass	_____ MW	Fuel Source: _____
<input type="checkbox"/> Steam Turbine	_____ MW	
<input type="checkbox"/> Gas Turbine	_____ MW	Fuel Source: _____
<input type="checkbox"/> Wind Turbine	_____ MW	
<input type="checkbox"/> Hydro Turbine	_____ MW	
<input type="checkbox"/> Inverter Based: (e.g., Photovoltaic, Fuel Cell)	_____ MW	
If Fuel Cell, please describe primary fuel source: _____		
<input type="checkbox"/> Combined Cycle	_____ MW	Fuel Source: _____
<input type="checkbox"/> Other (please describe):	_____	

d. Name, address, telephone number, and e-mail address of applicant (primary person who will be contacted);

Name:  
 Title:  
 Company Name:  
 Street Address:  
 City, State:  
 Zip Code:  
 Phone Number:  
 Fax Number:  
 Email Address:

3. Non-Refundable processing fee of \$300 as specified in Rule 21 is required to complete this Pre-Application Report Request. **DO NOT SEND THE APPLICATION FEE WITH THIS PRE-APPLICATION REQUEST. PG&E WILL INVOICE APPLICANT FOR THE FEE ONCE THIS APPLICATION IS RECEIVED** (Any checks/monies submitted with this Pre-Application Report Request will be returned to the sender and may result in a delay in this request).

4. This Pre-Application Report Request shall be submitted with attachments to:

**PG&E RULE 21 PRE-APPLICATION REPORT REQUEST**

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**Electronically to (preferred):** [gen@pge.com](mailto:gen@pge.com)

OR by mail to:

Pacific Gas and Electric Company  
Attn: Manager, Generation Interconnection Services  
P.O. Box 770000  
Mail Code N7L  
San Francisco, California, 94177

Overnight address: 245 Market Street Mail Code N7L San Francisco, CA 94105

OR by facsimile to:  
415-973-3064

5. I understand that the contents of the Pre-Application Report are confidential and shall not be disclosed to anyone who is not an employee or other representative (including consultants) of the company or corporation I am employed with.
6. This Pre-Application Report Request is submitted by:

Legal name of applicant: \_\_\_\_\_

By (signature): \_\_\_\_\_

Name (type or print): \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Phone Number: \_\_\_\_\_